

# SOAP AND CHEMICAL SPECIALTIES

SEPTEMBER 1961

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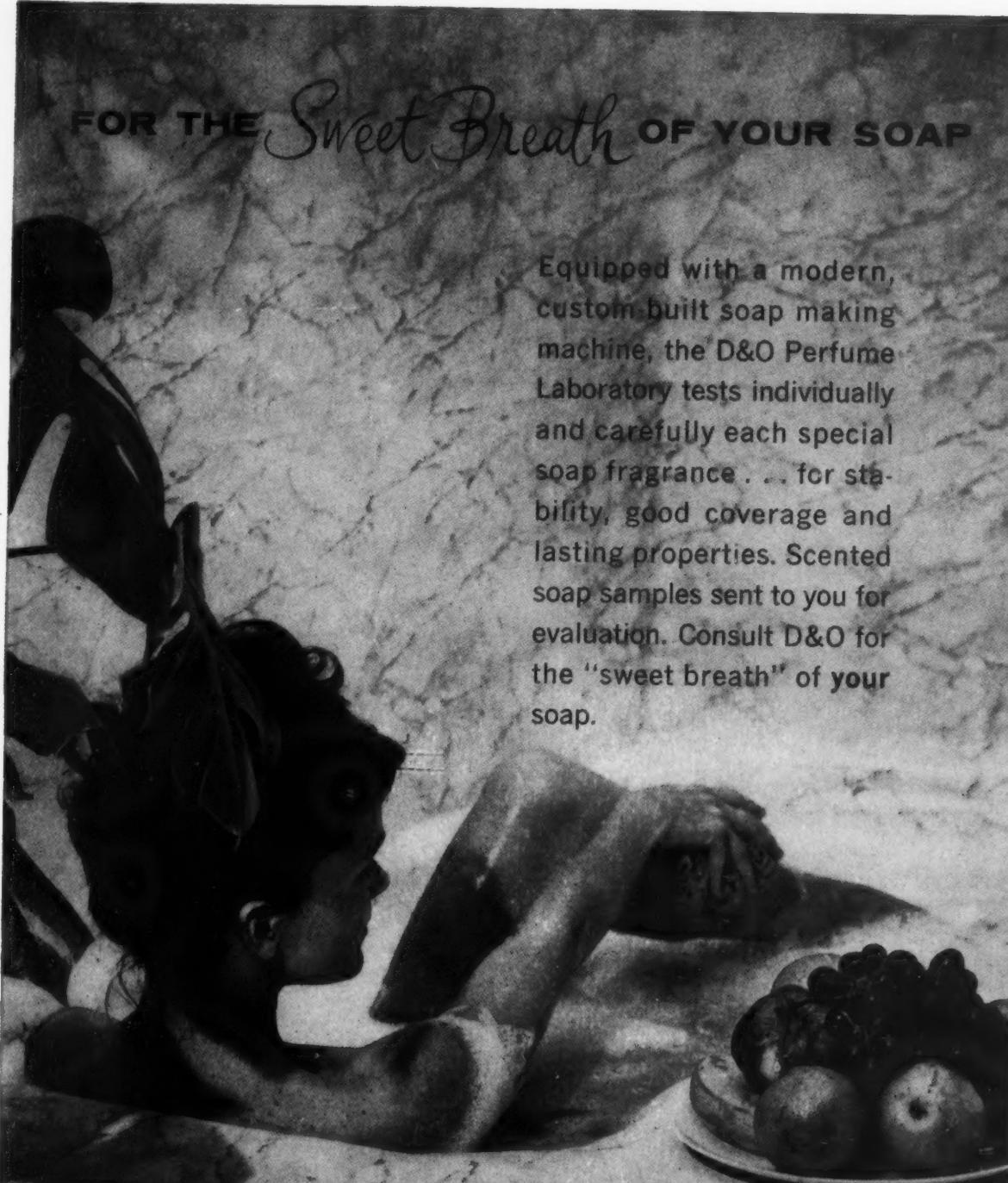


John M. Tyson, just elected to the newly created position of vice-president in charge of sales for Simoniz Co., Chicago, will direct overall sales and sales promotion activities. He was formerly director of advertising for Simoniz.

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FOR THE *Sweet Breath* OF YOUR SOAP



Equipped with a modern, custom-built soap making machine, the D&O Perfume Laboratory tests individually and carefully each special soap fragrance . . . for stability, good coverage and lasting properties. Scented soap samples sent to you for evaluation. Consult D&O for the "sweet breath" of your soap.

Standardization and high quality aromatic chemicals, essential oils and perfume specialties guaranteed through individual shipment testing in the D&O Analytical & Control Laboratory.



OUR 161st YEAR OF SERVICE  
**Dodge & Olcott Inc.**

Seventy-five 9th Avenue, New York 11, N. Y.  
Sales Offices in Principal Cities

ESSENTIAL OILS

AROMATIC CHEMICALS

PERFUME BASES

SPRAY-CHIRED FRAGRANCES

# The QUATERNARY with the HIDDEN PLUS...



**BTC-2125**®

The quaternary that really does the job and sets the standard.

The hidden plus is at least 750 ppm water-hardness tolerance. You can have this, at no additional cost, if your formulator is using **BTC-2125**® as the active ingredient in his sanitizer or detergent sanitizer.

Highest phenol coefficients, maximum biocidal properties mean extra safety and performance for you.

The active ingredient designation for **BTC-2125** offers you ultimate in environmental sanitation for same dollar spent.

**BTC-2125** is a carefully controlled blend of two distinct quaternaries, alkyl (C<sub>14</sub> 60%, C<sub>16</sub> 30%, C<sub>12</sub> 5%) dimethyl benzyl ammonium chlorides and alkyl\* (C<sub>12</sub> 50%, C<sub>14</sub> 30%, C<sub>16</sub> 17%, C<sub>18</sub> 3%) dimethyl ethylbenzyl ammonium chlorides. When one or both of these active ingredient statements appear on the label, you are assured of the very best of quaternary germicides.

Be sure **BTC-2125** is the active ingredient statement when specifying germicides. The finest products are made with the best quaternaries. Insist that the product **you** use contains **BTC-2125** . . . the "hidden plus" in the superior germicidal products. Onyx provides the required quality, research and development that go with a company that puts fifty years of experience and leadership behind their products.

\* U. S. P. 2,676,986



**ONYX CHEMICAL CORPORATION**  
190 Warren Street, Jersey City, New Jersey  
offices in Boston-Charlotte-Atlanta  
Cleveland-Chicago-Los Angeles-San Francisco



## COLORLESSNESS begins with Emery Oleic Acids

To obtain a light color in any product, it is easier to start with white or colorless basic ingredients. It's costly and often impossible to remove color later. Emery gives you the colorless raw materials you need.—Emersol® 233 LL Oleic Acid and Emersol 221 Low Titer White Oleic Acid.

When you start with colorlessness, you can add as little or as much color as you wish. And the remarkable color

stability of Emersol Oleic Acids, as assured by product specifications, minimizes color changes during processing and throughout shelf life. If the oleic acid you are now using cannot meet these specifications, why not let us send you samples that can, time after time? It costs you no more for this extra quality.

Write Dept. 5-9 for samples or 20 page comprehensive booklet "Oleic Acid Emeryfacts."

**A little extra everything except price**

COLOR SPECIFICATIONS	Maximum Color		Maximum Color Stability	
	Photo. Index	Lovibond 5 1/4" (Y/R)	Photo. Index	Lovibond 5 1/4" (Y/R)
Emersol 233 LL Oleic Acid	11/0.5	3/0.5	32/4.5	10/3
Emersol 221 Low Titer White Oleic Acid	15/0.5	5.0/0.5	51/10.5	20/7

Emery Industries, Inc., Carew Tower, Cincinnati 2, Ohio • Vopcolene Division, Los Angeles, Calif. • Emery Industries (Canada) Ltd., London, Ontario • Export Division, Cincinnati

**Emery**  
FATTY ACID DIVISION

Vol. XXXVII, No. 9 Sept., 1961

*Cover Photo: John M. Tyson, who has just been elected vice-president in charge of sales for Simoniz Co., Chicago, directs overall sales and sales promotion activities for the company. He joined Simoniz last year as advertising director. Previously, he had been with Leo Burnett Co., Chicago, and McCann-Erickson, New York, advertising agencies.*



## IN THIS ISSUE

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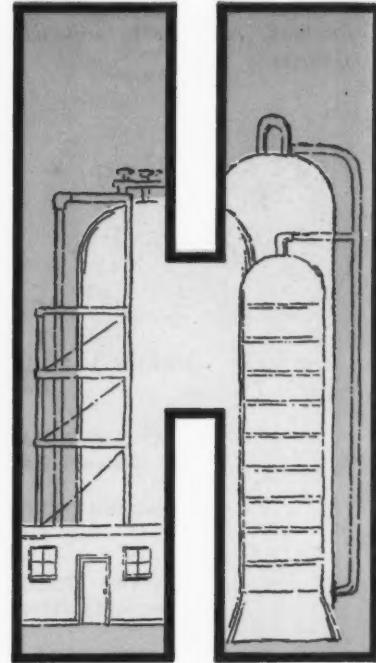
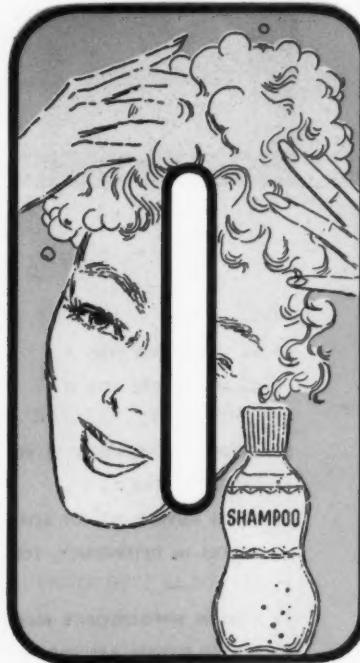
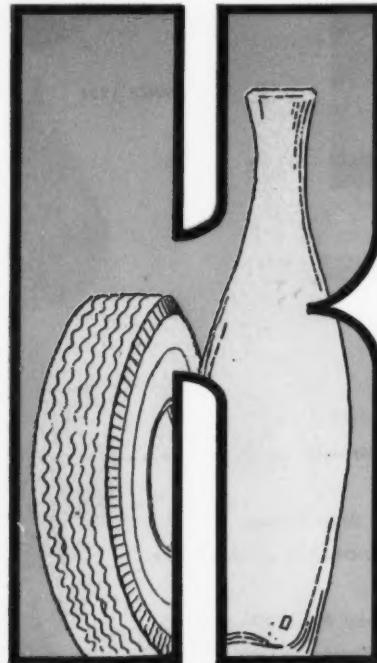
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# Alkali users who depend on



depend on **fmc!**

#### CAUSTIC POTASH

Liquid 45% and 50%;  
Flake and Solid.

#### CAUSTIC SODA

Liquid 73%, Liquid 50%,  
Regular and Low Chloride Grades;  
Flake, Solid and Ground.

Superior solubility, absorptive and other qualities of caustic potash make it preferred to other alkalis for a number of applications.

While liquid soaps, shampoos and other detergent uses consume a large portion of production, substantial and growing amounts are required in synthetic rubber, various speciality glasses, ceramics, petroleum refining and chemical processing.

FMC has steadily expanded production to keep ahead of these increasing requirements. Our caustic potash is made to specifications geared to our customers' needs, and is packaged to preserve its quality in shipment. From So. Charleston, W. Va. and stock points we are able to assure unusually prompt deliveries to most users.

Your call to our nearest District Office (New York, Philadelphia, Charlotte, Chicago, Cincinnati, Denver, St. Louis, Los Angeles and Newark, Calif.) will get prompt and helpful attention.



#### CHLOR-ALKALI DIVISION

161 E. 42nd Street, New York 17

NOW...a new surfactant molecule to give you the balanced best of two outstanding surfactant classes



The new Stepan Amidox series offers excellent potential for use in detergents, shampoos, emulsions and other systems. Consisting of a series of ethoxylated alkylolamides, this whole new group of surfactants combines the advantageous characteristics of both alkylolamides and phenol polyglycol ether nonionics. The series ranges from a predominantly alkylolamide character to a predominantly nonionic character as increasing amounts of ethylene oxide are added to the amide. Thus, in varying degrees the foam boosting, viscosity building properties and the relative mildness of the alkylolamide is combined with the superior solubility in hard water and alkaline stability of the nonionics.

The Amidox L series are ethylene oxide condensates of lauric monoethanolamides. The Amidox C series are ethoxylated coconut fatty acid monoethanolamines.

*Write for complete information*



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**Warehouses:** Joliet, Ill.; Maywood, N. J.; Atlanta, Ga.; Tampa, Fla.; St. Louis, Mo.; Dallas, Tex.; Los Angeles, Calif.; San Francisco, Calif.

**Canada:** Charles Tennant & Company (Canada) Limited, Toronto, Montreal, Vancouver.

**Export:** Agents in principal cities throughout the world.

# ATLANTIC ULTRAWETS<sup>®</sup> PERFECT FOR ALL HOUSEHOLD DETERGENTS



	Ultrawet	Solids	Molecular Weight	Appearance	Active Minimum
<b>LIQUIDS</b>					
Clear	30DS	30%	Medium	Clear, pale yellow	27.0%
	60L	60%	High	Clear, pale yellow	60.0%
	35KX	35%	Medium	Clear, pale yellow	31.5%
Slurries	35K	35%	High	Pale yellow	31.5%
<b>PLAKES</b>					
	DS	100%	Medium	Light, cream colored	90%
	K	100%	High	Light, cream colored	90%
	K Dense	100%	High	Light, cream colored	90%
	KX	100%	Medium	Light, cream colored	90%
	KX Dense	100%	Medium	Light, cream colored	90%
<b>BEADS</b>					
	SK Bead	100%	High	White, free flowing	40%
	SK Bead High Density	100%	High	White, free flowing	40%

## Recommended Applications

Penetrant, wetting agent, metal cleaner, emulsion polymerization.

Liquid detergents, wet textile processing shampoos, car wash, household detergent formulations, janitorial supplies.

Liquid detergents and household cleaners, wet textile processing, emulsion polymerization, post stabilizer for emulsions.

Drum-dried and spray-dried cleansing compounds, light and heavy-duty liquid detergents.

Industrial detergents, emulsifier, dry mixing with alkalies, air entraining agent.

Industrial detergents, heavy-duty household detergents, emulsifier, dry mixing with alkalies.

Same as above.

Same as 35KX in dry form.

Same as KX—except smaller particle size with increased density, air entraining agent.

Light-duty household detergents, dry mixing with alkalies.

Same as above—synthetic wool washes, air entraining agent.



Whether your customers are gently shampooing a baby's hair or doing heavy household cleaning—there is an Atlantic Ultrawet especially designed to build just the right detergent formulation.

Detergency, wetting ability, sudsing action, lack of odor and long shelf-life stability are of utmost importance and must be consistently and carefully controlled. That's why Atlantic Ultrawets are produced with precision control in every step of the manufacturing process. This stringent control assures you of consistently high-quality alkyl aryl sulfonates for your formulations.

There's an Atlantic Ultrawet for your formulation.

The background and experience of our sales engineers are other Atlantic extras. Each man is a graduate chemist or chemical engineer—the solid background invaluable to you in preparing your finished products and in devising new formulations for new products. Write or call us for the whole story.

### THE ATLANTIC REFINING COMPANY

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Company of Brazil, Rio de Janeiro.





## AMERCHOL Lanolin Derivatives

add specific new functional properties to lanolin's most active components

AMERCHOL Derivatives and lanolin do have a common denominator, but the similarity ends there. AMERCHOL Derivatives add special properties and specific functional effects to lanolin's most active components. These unusual materials provide the formulating chemist with valuable new tools for producing superior cosmetic and aerosol products.

### moisturizer

AMERCHOL L-101<sup>®</sup>—powerful free-sterol depressant of interfacial tension. Excellent auxiliary emulsifier. Adds gloss, soft textures, and superb emollience to formulations and imparts valuable moisturizing effects to the skin.

### solubilizer

SOLULANS<sup>®</sup>—ethoxylated derivatives. Water soluble, yet emollient! Solubilizers of great general utility. Impart excellent plasticizing, lubricating, and conditioning qualities at low concentrations.

Complete technical data, samples and suggested formulas are available from our research laboratories.

### penetrant

ACETULAN<sup>®</sup>—acetylated lanolin alcohols. Non-oily hydrophobic liquid emollient. Penetrates and lubricates leaving a persistent soft after-feel that is truly remarkable.

### emollient

MODULAN<sup>®</sup>—acetylated lanolin. Our own patented product. An unusual hypo-allergenic emollient. Non-tacky, oil soluble, and hydrophobic. Excellent for emulsions, soaps, baby oils, and brilliantines.

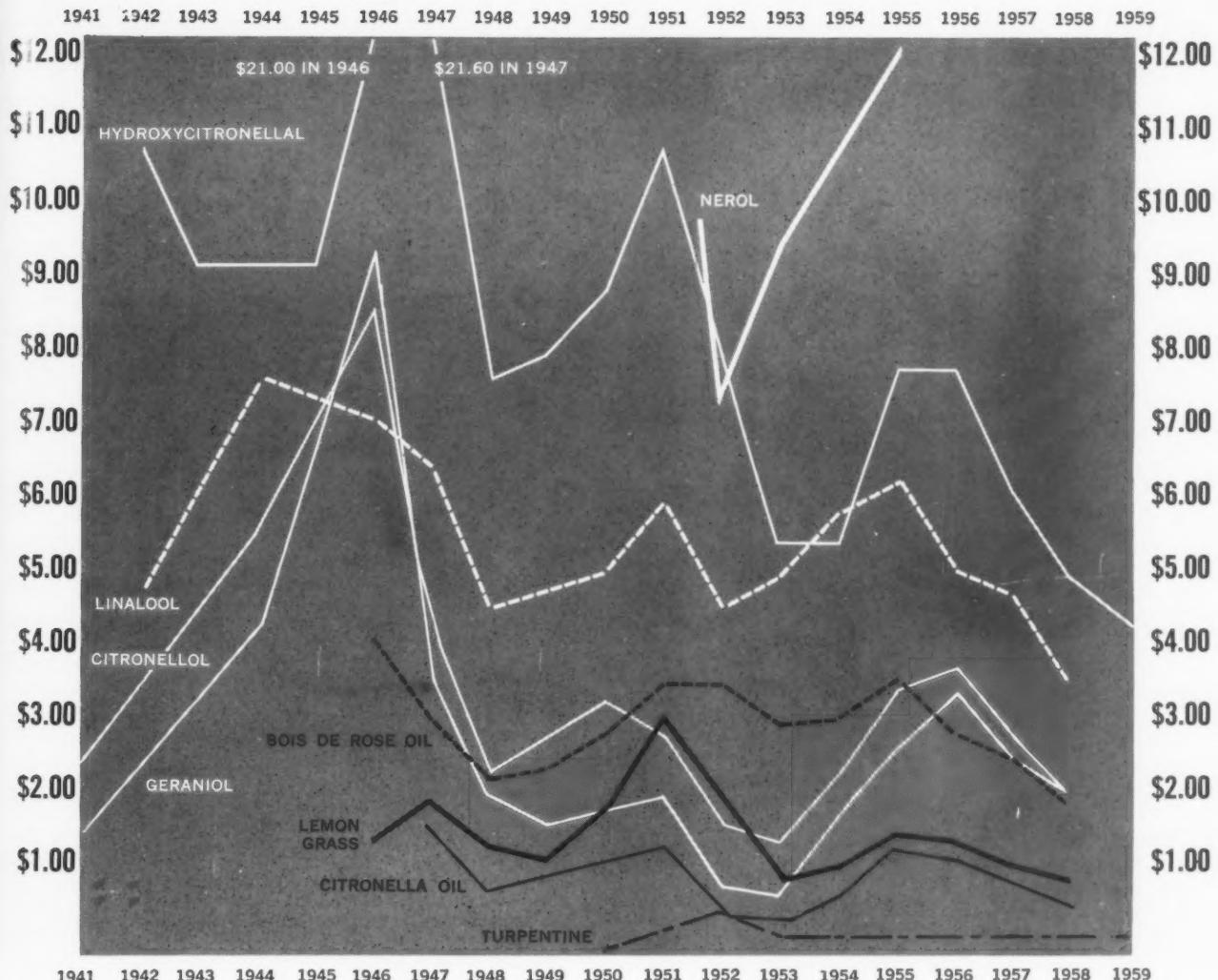
### liquid lanolin

VISCOLAN<sup>®</sup>—dewaxed lanolin. Supplies all the natural benefits of lanolin in intensified, convenient liquid form. Oil-soluble, low odor and color.

### unsaturate

POLYLAN<sup>®</sup>—essential polyunsaturate. Liquid wax ester. Combines the natural benefits of linoleic acid with the softening, protective, and conditioning properties of lanolin's most active components.

**Amerchol**  
AMERICAN CHOLESTEROL PRODUCTS, INC.  
Amerchol Park • Edison, New Jersey



## STABILIZE YOUR PERFUME COSTS

The historic unpredictability of perfume costs need no longer apply to your perfuming operations. No longer need you "worry" your perfume supplies, stretching them thin in certain products as costs suddenly cycle upwards, avoiding their use entirely in other marginal products.

The new Firmenich-Glidden Aromatics, derived from an abundant domestic source, make it possible for you to use the finest quality aromatics as freely as you wish, in any product you wish, with complete confidence that sudden changes in price, quality, and foreign supplies will not disrupt your manufacturing and marketing program.

The economic advantages provided by Firmenich-Glidden Aromatic Chemicals are perhaps best illustrated by reviewing the costs of these same aromatic chemicals as derived from natural sources. The figures demonstrate most forcibly the economic burden which the uncertainties of supply, compounded by natural and artificial restrictions, have placed upon the aromatics consuming industry.

Write for further information on these exceptional new aromatics. Ask for samples in the commercial quantities you need.

**LINALOOL • GERANIOL • CITRONELLOL • NEROL • HYDROXYCITRONELLAL**

SEPTEMBER, 1961



Trademark of The Glidden Company

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CHUIT NAEF & CIE.  
GENEVE SUISSE

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ONTARIO: 350 WALLACE AVE., TORONTO 9

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MEXICO CITY • SAO PAULO • BUENOS AIRES

# STEER A STEADY COURSE with CANDY PRODUCTS

PRIVATE BRAND\* RESALE BUYERS OF WAXES  
AND KINDRED PRODUCTS... Your Quality Guide...

## Beauty and Durability

Initial appearance is important, but for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffic, but even more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

## Anti-Slip

Anti-slip, or reasonable safety underfoot, does not mean that the qualities of beauty and protection need be sacrificed. The proper balance—a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily—gives the performance that answers the foremost original reason for use of a floor wax—beauty and protection.

## Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Overdoing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as water-resistance under most normal conditions.

## Solid Content

The percentage of solid content is not nearly as important as the **quality** of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Over-waxing and resultant greater difficulty in removal for periodic maintenance should be avoided.

## Carnauba Wax

The most important features of a good wax . . . all-around quality of performance . . . are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given wax feature should be avoided and proper care taken to provide for most satisfactory performance.

## WATER EMULSION WAXES

Each of Candy's floor waxes are all-around top quality for certain traffic conditions. They impart the finest protection and beauty to floors for which best suited.

### CANDY'S SUPREME (standard)

**BRIGHT BEAUTY®**

**CANDY'S SUPREME Special WR**

**SUPER CAND-DOX®**

**CAND-DOX® # CS**

**CANDI-WAX #6000**

Other CANDY & CO.  
**HIGHEST QUALITY**

PRODUCTS

**CANDI-COAT 1000, WATER RESIN EMULSION**—As a floor coating for use under specific conditions of continued maintenance on certain types of floors this water resin emulsion has none of the faults associated with coatings of this type. It is the finest product in its class produced up to this time.

**Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER**—For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface cleaner. Pleasant odor, crystal clear color and thorough cleaning action with all types of equipment. Unaffected by hard freezing. Furnished ready for resale or in concentrated form for local packaging . . . nothing but water to buy or mix in.

**CANDI-CLEAN** all surface—all synthetic **CLEANER**—This is an all synthetic and all purpose surface cleaner with free rinse and free wipe off qualities. Furnished in several colors and odors, and properly priced. Available in two concentrations for resale and in concentrated form for dilution with water for local packaging.

**Bright Beauty CREAM FURNITURE POLISH**—A cream furniture polish that spreads easily, polishes without excessive effort to a deep impressive lustre. Permits *repeated repolishing* with a dry cloth, thus saving many re-applications. A very economical polish of the very highest quality.

**Bright Beauty PASTE WAX**—Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, having "creamy" consistency and stability that lasts throughout storage and usage life.

**Bright Beauty LIQUID (spirit) PREPARED WAXES**—A complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each acts as a "dry cleaner" to keep surfaces wax protected with a superb coating necessary for many applications such as wood and certain other types of floors; for bars, wallpaper, etc.

**Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH**—As a glass cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass. As a cleaner of silver, it polishes to a high lustre *without abrasion* and can even correct the abuses of scratchy "quick-polish" inferior products.

**Bright Beauty DANCE FLOOR WAX**—Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove . . . free from dusty effects. Its protective quality adds more "floor-years" to expensive ballroom floors.

**Bright Beauty Heavy Duty PASTE CLEANER**—*Cleans and scour*s more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign matter.

**CONTAINER SILK SCREEN LABELING**—Now you can have dramatic, colorful labeling of your private brand name on all 55, 35, 30, 20 & 15 gal. drums and 5 gal. pails. This added service is accomplished right in our plant . . . your inspection invited . . . or write for details.

\*All Candy's products are available for private brand resale and are sold only through distributors except for experimental accounts in Chicago essential to research.

**Candy & Company, Inc.**

Wax Specialists for over 65 years

EST. 1891

2515 W. 35th ST., CHICAGO 32

# CONOCO



*Dodecylbenzyl  
chloride  
technical grade  
... the intermediate for  
cationic surface active agents*

**\*TYPICAL PHYSICAL PROPERTIES**

Specific Gravity at 60°F	0.965
Apparent Molecular Weight	292
Activity	Approx. 95%
Minimum Activity	90%
Flash Point (C.O.C.)	355°F.
Viscosity S.U.S. at 100°F	105
Pour Point	Less than -5°C.



*For chemicals with a head start  
on the future . . . count on CONOCO!*

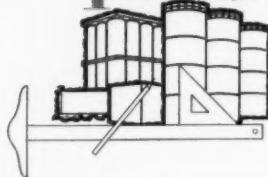
CONOCO DBCL reacts with tertiary amines to form cationic surface-active agents—known chemically as “quaternary ammonium salts.” Quaternaries are used as the active ingredients in sanitizer preparations, as textile softeners, and as antistatic agents for fibers, plastics, and paper. Nonionic surface-active agents may also be made by reacting CONOCO DBCL with the appropriate polyglycol.

For samples and further information, just send a request on your letterhead.

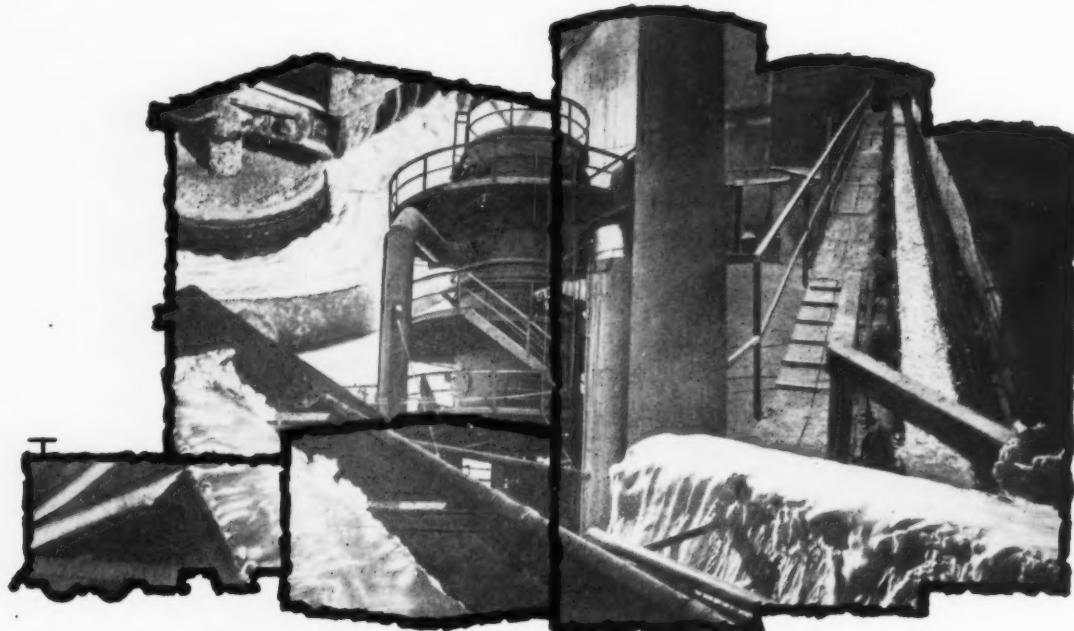
**CONTINENTAL OIL COMPANY, PETROCHEMICAL DEPARTMENT**  
1270 AVENUE OF THE AMERICAS, NEW YORK 20, NEW YORK

WEST END

*advance  
planning*



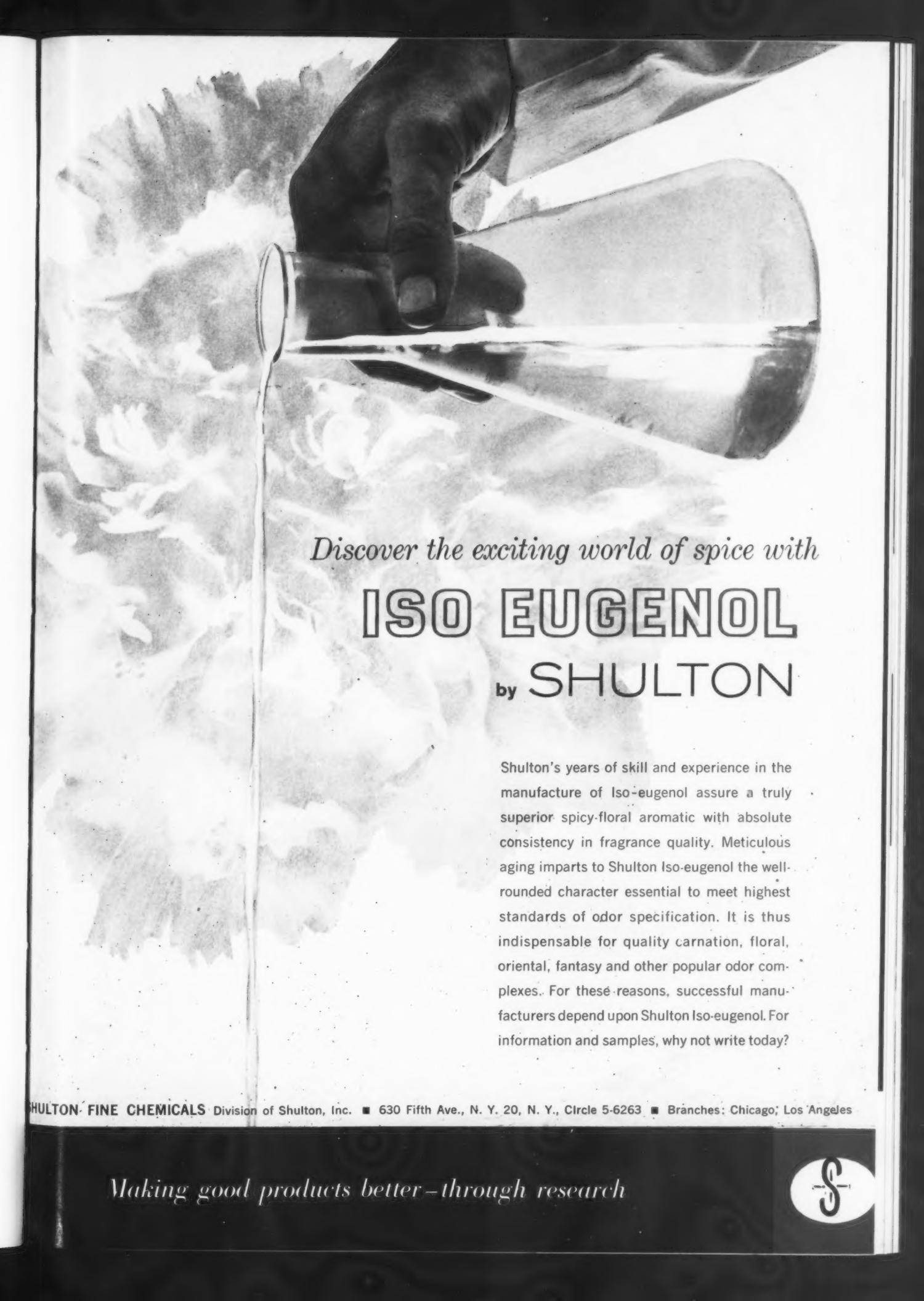
OF EXPANDED SODIUM SULFATE  
PRODUCTION ANTICIPATES  
INDUSTRY'S GROWING NEEDS



WEST END demonstrates its complete reliability as a major source by the continuing enlargement of its production facilities devoted to the manufacture of highest quality anhydrous sodium sulfate as a prime product. Independent of other product production and located at the site of vast natural raw material supply, West End is solidly qualified to handle the complete requirements of customers dependably, economically and efficiently.



WEST END CHEMICAL COMPANY • DIVISION OF STAUFFER CHEMICAL COMPANY  
636 CALIFORNIA STREET, SAN FRANCISCO, CALIFORNIA • PLANT: WESTEND, CALIFORNIA



*Discover the exciting world of spice with*

# **ISO EUGENOL**

**by SHULTON**

Shulton's years of skill and experience in the manufacture of Iso-eugenol assure a truly superior spicy-floral aromatic with absolute consistency in fragrance quality. Meticulous aging imparts to Shulton Iso-eugenol the well-rounded character essential to meet highest standards of odor specification. It is thus indispensable for quality carnation, floral, oriental, fantasy and other popular odor complexes. For these reasons, successful manufacturers depend upon Shulton Iso-eugenol. For information and samples, why not write today?

**SHULTON FINE CHEMICALS** Division of Shulton, Inc. ■ 630 Fifth Ave., N. Y. 20, N. Y., Circle 5-6263 ■ Branches: Chicago; Los Angeles

*Making good products better—through research*





... And because of greater purity, HD-90 offers you higher product performance. Pilot HD-90 does a kind of cleaning on many hard surfaces that no other material can do at any concentration. That's *maximum quality level!* It means new sales areas for your products.

Because of greater purity, Pilot HD-90 is whiter in color and has less odor than any comparable product. *It can save you money on perfumes.*

Pilot HD-90 is stable in any weather. Even on hot, sticky, humid days production rolls along in high gear—and your products retain this all-weather protection, too.

Pilot HD-90 gives you greater flexibility in detergent formulations—builds more cleansing and sudsing power into what you make: *Automotive Cleaners, Dishwashing Compounds, Household Cleaners, Steam Cleaners, Bubble Baths, etc.* Write for formulas and samples now.

Packed in polyethylene-lined fibre drums and 5-ply paper bags.

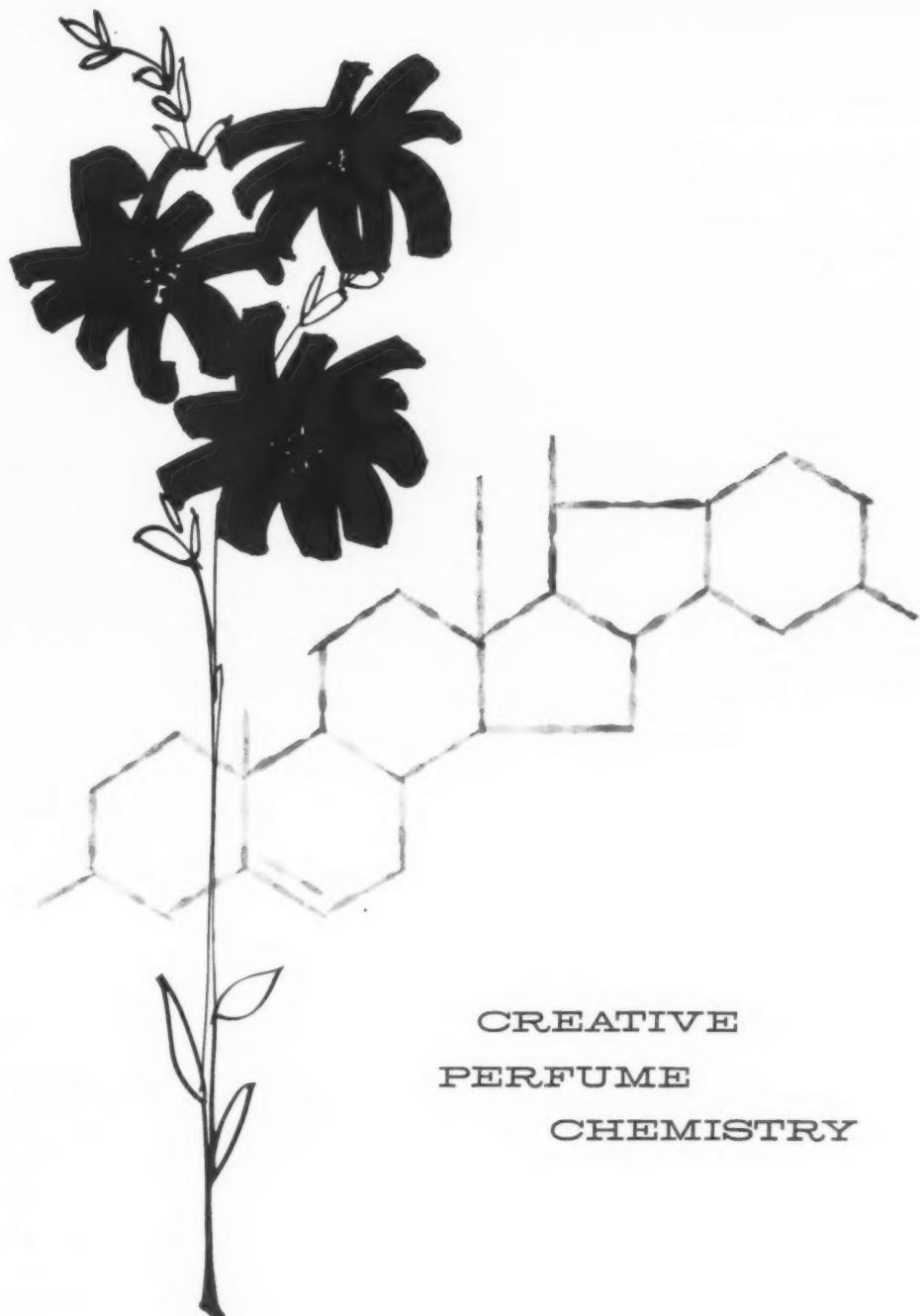


PILOT

*Chemical Company  
of California*

P. O. BOX 22130 • LOS ANGELES 22

Basic Processors of  
Hydrocarbons for  
Sulfonate Flake  
Sulfonate Liquids  
Sulfonic Concentrates



CREATIVE  
PERFUME  
CHEMISTRY

# F L E U R O M A

NEW YORK

CHICAGO

PARIS

LONDON

SAO PAULO

SEPTEMBER, 1961

# HEAVY DUTY DETERGENTS

For  
superior



## ALKANE\* 60

Alkane 60 — processes to highest quality sulfonates  
lowest oil — best color — best odor

Alkane 60 — High Molecular Weight  
means better foam, better detergency

*For the complete story on Alkane 60, contact the Oronite office nearest you.*



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ORONITE DIVISION

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San Francisco, Seattle

FOREIGN AFFILIATE • California Chemical International, Inc., San Francisco, Geneva, Panama, São Paulo

# AFTER CLOSING---

## Extend New York City Aerosol Ban

ALL aerosol products containing "flammable gas" will shortly be banned from sale in New York City, it was learned early this month. Regulations to this effect are being worked out by the New York City Fire Department and their publication in *The City Record*, official journal of the City of New York, is expected momentarily. "Flammable gas" as propellants or mixtures with other gases are to be outlawed in formulations of pressure packaged products, including foams.

Such a step by New York City considerably broadens an earlier ban on "flammable gas" in hair sprays, paints, shellac, varnishes, enamels and lacquers. The use of "flammable gas" in these products was outlawed by New York City on June 20. Gases regarded as flammable include butane, propane, isobutane and others.

What effect the latest step by New York City's Fire Department would have on a meeting scheduled for Sept. 14 of fire department officials with representatives of a Special Committee on New York Fire Department Regulations was not known. The committee, appointed by George Barr, head of G. Barr Co., Chicago, chairman of the executive board of the Aerosol Division of CSMA, includes the following members:

E. F. Helper, Powr-Pak, Inc., Bridgeport, Conn., chairman; J. J. Buchanan, Continental Can Co., Chicago, vice-chairman; R. L. Ackerly, Cummings & Sellers, Washington, D. C., council for CSMA; Charles E. Beach, John C. Stalfort & Sons, Inc., Baltimore, CSMA president; S. J. Campbell, Continental Filling Corp., Danville, Ill.; G. V. Cass, Krylon, Inc., Norristown, Pa.; P. Dyer, Phillips Petroleum Co., Bartlesville, Okla.; R. J. Morse, Boyle-Midway Division, American Home Products Corp., New York; J. L. Perlman, B. T. Babbitt, Inc., New York; Harry Peterson, Peterson Filling &

Packaging Co., Danville, Ill.; R. P. Reavey, John H. Breck, Inc., Springfield, Mass.; F. T. Reed, E. I. du Pont de Nemours & Co., Wilmington, Del.; R. J. Scott, Union Carbide Chemicals Co., New York; W. Seligsohn, Colgate-Palmolive Co., New York, and H. R. Shepherd, Aerosol Techniques, Inc., Bridgeport, Conn.

Leading the one-man fight on the use of "flammable propellants" is Theodore Heilig, head of Regal Chemical Corp., Brooklyn, pioneer aerosol contract loader. Mr. Heilig claims he and his firm have been investigating possible hazards resulting from the use of "flammable gas" propellants since the spring of 1959. In November of that year, based upon work done in the research laboratories of a leading eastern university under the direction of an authority on petrochemicals, he wrote to the New York City Fire Department regarding hydrocarbon propellants. He has also contacted fire departments in other cities. Mr. Heilig declares that his interest in seeing "flammable gas" outlawed as a propellant in pressure packages is motivated by considerations of safety and as a public service. He professes to feel that a serious accident involving hydrocarbon propellants could adversely affect the interests of the entire aerosol industry.

Hydrocarbon propellants cannot be stored or transported into New York City, although permits are issued for butane, propane, etc. in certain instances.

Industry spokesmen feel that the safety record of aerosols is an outstanding one, and that the dangers involved in the use of hydrocarbon propellants is minor.

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### Flit Sold

The domestic rights to the famous insecticide trade-name, "Flit", have been sold to the Black Leaf Products Co. of Chicago, by

the Esso-Standard Oil Co., New York, subsidiary of the Humble Oil Co. of Houston, Texas. The effective date of the sale is October 1. Foreign rights to the name are being retained by Esso-Standard. One of the oldest and best known trade names for household insecticides, "Flit" dates back close to 40 years to the days when pyrethrum extracts were first made and marketed for liquid insect sprays. "Flit" was originally made and marketed by Stanco, Inc., a subsidiary of the Standard Oil Co. of New Jersey.

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### Brady Retires from Fels

Joseph B. Brady, manager of the western division of Fels and Co., Philadelphia, retired July 1, after 35 years of service with the firm. He continues to serve the company in an advisory capacity.

Mr. Brady joined the Fels organization in Philadelphia in 1926 as a retail salesman. Two years later he was moved to Pittsburgh as supervisor for the western Pennsylvania area which included eastern Ohio and West Virginia. In 1939 he was transferred to California to set up a western division office. He served as western division manager for the past 21 years.

Joe Stombaugh, succeeding Mr. Brady as division manager, has

Joseph B. Brady



established a new division office at 4814 Loma Vista Ave., Los Angeles 58.

#### Phosphate Prices Cut

Price reductions of 17 cents a 100 pounds on sodium tripolyphosphate and tetrasodium pyrophosphate were announced last month by Monsanto Chemical Co., St. Louis, Mo. Current bulk prices now are \$7.18 for tripolyphosphate and \$6.83 for TSPP.

Improved production methods are responsible for the price cuts. The market for phosphates has reportedly been firm.

#### Fanning to Millmaster

Frank G. Fanning, for the past 11 years head of Fanning Chemical Corp., Newark, N. J., has joined Millmaster Chemical Corp., New York, as vice-president of the Fanning Chemical Division, it was announced recently by Robert J. Milano, president of Millmaster. The Fanning Chemical Division will market lanolin and lanolin derivatives as well as other products for the soap, cosmetic and pharmaceutical industries and allied trades.

Before forming his own company, Mr. Fanning was for over 25 years sales manager of N. I. Malmstrom Co., Brooklyn lanolin producers.

Active in the affairs of the Salesmen's Association of the American Chemical Industry, he served as president of SAACI in 1944.

Frank G. Fanning



## Canadian Specialties Meeting Oct. 29-Nov. 1

**A** CLINIC on industrial packaging design, an aerosol package contest, a discussion of the marketing possibilities for chemical specialties in the pleasure boat industry and a panel session on hospital sanitation are among the highlights of the fourth annual meeting of the Canadian Manufacturers of Chemical Specialties Association. C. M. C. S. will meet Oct. 29 through Nov. 1 at the Royal York Hotel, Toronto.

All six divisions of which C.M.C.S. is composed will hold individual or joint sessions during the three day meeting, which opens with the clinic on industrial packaging design, Tuesday morning, October 31. Allan Jarvis, Allan Jarvis and Associates, whose firm specializes in industrial design, has agreed to speak on this subject. Also scheduled for the first morning of the meeting is a session of the Aerosol Division of C. M. C. S. Among subjects tentatively slated to be discussed are: "Aerosols in the Future," by the sales manager of an American can producer; "The Past, Present and Future of Aerosol Valves," by the representative of an American valve manufacturer; "Propellants in Aerosols," by John Hinn of Air Reduction Co., and "Aerosol Powders."

The afternoon of Oct. 31 there will be concurrent sessions of the Pesticides Division and the Waxes and Floor Finishes Division. George Hartz of Prentiss Drug & Chemical Co., New York, will speak on "Butonate—A New Insecticide." The subject of the "Cattle Face Fly" is expected to be dealt with by four speakers at the Pesticides Division forum. W. P. Watson, Livestock Commissioner, Province of Ontario, and W. E. Heming, Ontario Veterinary College, have agreed to discuss various aspects of this problem.

Also set for the afternoon of Oct. 31 is the wide angle view of "The Application of Chemical

Specialties to the Booming Pleasure Boat Industry." This subject will be discussed at the joint session of three divisions of C.M.C.S.: Soaps and Detergents; Disinfectant and Sanitizers and Automotive, Marine and Transportation Chemicals.

The annual meeting of C. M. C. S. opens the day's program activities on Wednesday morning, Nov. 1. At this session, Reginald L. Jones, of Colgate-Palmolive, Ltd., Toronto, will give his address as 1960-61 president of C. M. C. S. Following this there will be election of officers and directors for the coming year. Upon the conclusion of the association's business meeting a "wide interest" session will take up the subject of "Federal and Provincial Taxation." Speakers who will discuss this subject include: E. O. W. Hehner, Corporation House, Ottawa, sales tax expert and J. S. Proctor, executive vice-president, Canadian Imperial Bank of Commerce.

Following a group luncheon, divisional sessions resume in the afternoon of Nov. 1, final day of the meeting. The subject of hospital sanitation will be discussed by a panel during a joint meeting of three C. M. C. S. divisions: Soaps and Detergents; Disinfectants and Sanitizers, and Waxes and Floor Finishes. Hospi-

R. L. Jones  
CMCS President



tal administrators from Canada are expected to address this session, which will also hear from Harold G. Lederer of R. M. Hollingshead Corp., Camden, N. J.

A second forum on aerosols and a presentation on new industry developments, under the direction of C. M. C. S.' technical committee will conclude the program for the day.

The board of directors of the Canadian Manufacturers of Chemical Specialties Association meets Sunday afternoon, Oct. 29, from 2:00 to 5:00 p. m., and again Monday morning, Oct. 30. Meetings of the six divisions of C.M.C.S. are scheduled for Monday afternoon to discuss future plans.

The social side of the fourth annual C. M. C. S. meeting includes group luncheons on Tuesday and Wednesday, Oct. 31 and Nov. 1, as well as open house in the Association hospitality suite Monday, Oct. 30, beginning at

8:00 p. m. A combined open house party, for which suppliers will act as hosts, is scheduled for Tuesday evening, Oct. 31, from 6:00 to 8:00 p. m. Concluding event of the meeting will be the cocktail party, banquet and floor show, followed by dancing, Wednesday evening, Nov. 1.

This year's first aerosol packaging contest sponsored by C. M. C. S. has been arranged by a committee under the chairmanship of Don Lee of Du Pont of Canada, Ltd.

Chairman for the fourth annual C. M. C. S. convention is John Caldwell of Diversey Corp. (Canada).

The C. M. C. S. meeting is open to non-members. For advance registration forms, hotel reservation cards, and other information, communicate with Jacques Chevalier, secretary manager, C. M. C. S., 3405 Cote des Neiges Road, Montreal 25, Canada.

#### **Chemical Service Expands**

Chemical Service of Baltimore, Inc., recently announced the acquisition of 12,000 square feet of additional building space adjacent to its Baltimore plant. The area will be used for finished-order assembly and warehousing. Plans also include the enlargement and modernization of the laboratories, and installation of four new 6,000 gallon production kettles. Work is scheduled to be completed by October 1.

#### **C-P Buys Reefer-Galler**

Colgate-Palmolive Co., New York, has acquired the assets and business of Reefer-Galler, Inc., 521 Fifth Ave., New York, and its wholly-owned subsidiaries, it was announced Aug. 31.

Reefer-Galler, purchased for cash, manufactures and distributes moth-control products and allied items, and will continue to operate as Reefer-Galler, Inc., a wholly-owned subsidiary. M. S. Galler, president of the firm, has been appointed an active consultant, it was also announced.

Mr. Galler founded No-Moth, Inc., in 1920 in Kansas City, Mo. The operation was incorporated in New York State in 1927, as Reefer's No-Moth, Inc., and in 1932, its name was changed to the present Reefer-Galler, Inc. Mr. Galler had been the operating head of the company since its inception.

#### **R. W. Montgomery Abroad**

R. W. Montgomery, co-manager in charge of all sales activities for Verona Aromatics, Newark, N. J., and his wife, have taken a trip abroad and will visit Germany, France and England. Mr. Montgomery will spend some time with Haarmann & Reimer, GMBH, Holzminden, West Germany.

#### **Inland Steel Names Geidt**

William E. Geidt has been appointed manager of marketing for Inland Steel Container Co., the pail and drum manufacturing division of Inland Steel Co., Chicago, it was announced recently.

#### **Allerton Names Avery**

Allerton Chemical Co., Rochester, N. Y., recently announced the appointment of



**Roland M. Avery, Jr.**

Roland M. Avery, Jr., as executive vice-president of the company. Mr. Avery will be in charge of coordinating overall operations of the company.

Mr. Avery was formerly midwestern division manager of UBS Chemical Co., Cambridge, Mass., a division of A. E. Staley Manufacturing Co.

#### **Hercules Names Managers**

The establishment of district managers for plastics sales in five districts was recently announced by the polymers department of Hercules Powder Co., Wilmington, Del. The new appointments are:

Charles A. Barton, district manager, Cleveland; John L. McKeen, district manager, Chicago; Paul J. Metzger, district manager, West Coast; Daniel G. Welsh, district manager, Cincinnati; and Robert R. Stover, district manager, New York.

#### **R. E. Wilkin Retires**

Robert E. Wilkin, senior vice-president of Hooker Chemical Corp., New York, since 1958, retired August 1, after 25 years of service with the company. He joined the company in 1936 as sales manager of fine chemicals. Mr. Wilkin was appointed general sales manager and a company vice-president in 1953. Two years later he was elected a member of the board and named director of sales.

### Entomologists to Meet

Over 1,000 member entomologists are expected to attend the annual meeting of the Entomological Society of America in Miami, Fla., Nov. 27-30. Headquarters hotels for the meeting will be the McAllister and Columbus. According to Dr. F. A. Arant, president of the society and head of the Department of Zoology and Entomology, Auburn University, attendance is expected from all states and many foreign nations.

More than 220 papers resulting from research on insects and their control will be presented during the four-day meeting, according to Dr. D. O. Wolfenbarger, program chairman for the meeting. Dr. Wolfenbarger, an entomologist with the Subtropical Experiment Station, Homestead, Fla., reported that six symposia and six panels are planned on subjects as widely varied as "Genetics in Entomology" and "The Use of Chemosterilants for Insect Control."

Nine separate sections will meet in separate and general sessions during the meeting. Control of insect pests by safe use of chemicals, by biological control and by relatively novel methods will be a major subject of consideration by research, extension, industrial and practicing entomologists.

### New Deodorizing Flakes

"Garb-O-Flakes," new deodorizing flakes developed by Surco Products, Inc., Hialeah, Fla., are now being sold to distributors of maintenance supplies packaged in air-tight metal containers (see cut) in 55, 15, and one-gallon sizes. The containers are equipped with a pouring spout which is used when the package is inverted. "Garb-O-Flakes" are intended for use in extreme odor producing areas as well as normal odor situations. The maker suggests the use of at least a tablespoon of the product for an ordinary garbage pail after removal of refuse to a handful for commercial garbage receptacles. "Garb-O-Flakes" are claimed to be non-toxic and non-corrosive and to



have application in many odor control situations.

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### Airco Advances Werly

G. L. Werly, Jr., has been appointed general marketing manager of Air Reduction Sales Co., New York, it was announced recently. In his new post, Mr. Werly will direct the operations of Airco's equipment marketing, gas marketing and distributor marketing departments. These departments control the nationwide marketing operations of Air Reduction Sales Co. in these specified areas.

Mr. Werly has been associated with Airco since 1951, when he started as a sales trainee with Ohio Chemical & Surgical Equipment Co., the medical division of Air Reduction Co., in Madison, Wis. Shortly after, he became a salesman and in 1954 was made manager of gas sales in that division. He subsequently became sales manager for Ohio Chemical's eastern region.

Mr. Werly was transferred to Air Reduction Sales Co. in 1959 and was advanced to manager of the gas marketing department, a position he held until his recent promotion.

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### CIBS Schedules Golf

The final golf date of CIBS New York, was to be held September 12, at The Knolls, Boonton, N. J., it was announced recently by Les Platt, Sheffield Tube Co., New London, Conn., who has succeeded Gil Luce as golf committee chairman.

### Unilever May Buy Domestos

Unilever, Ltd., is said to be negotiating for the purchase of Pinoya Holdings, Ltd., which controls Domestos, Ltd., Newcastle-on-Tyne, England, manufacturer of liquid detergents, disinfectants, bleaches, and other household chemical specialties. Unilever's offer will value Pinoya shares at \$3.75, about 50 per cent above the last previous sale. Pinoya's board is said to approve the bid and to be recommending its acceptance.

Unilever's bid for Domestos is seen as a move in the battle for the British liquid detergents market, which increased 50 per cent last year. Major contestants are Unilever, Thomas Hedley, Ltd. (British subsidiary of Procter & Gamble Co.), and Colgate-Palmolive, Ltd.

After the proposed merger, Unilever would hold over 50 per cent of the liquid detergents market; Hedley 25 per cent; the British unit of Colgate 15 per cent, according to estimates by trade sources.

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### Paul Dunkel Dies

Paul A. Dunkel, 67, board chairman of Paul A. Dunkel Co., chemical importers of New York and Jersey City, N.J., died Aug. 29.

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### New Falcon Folder

A new, eight-page reference booklet containing engineering constants, short cut tables, formulas, and technical data required frequently in plant operation is now being distributed by the Falcon Manufacturing Division of First Machinery Corp., Brooklyn. Copies of the folder, which carries data and illustrations of Falcon's ribbon blenders, are available by writing Falcon at 211 Tenth St., Brooklyn 15, N. Y.

Falcon also announced late last month that its new double ribbon mixer, first shown at the Plastics Exposition in New York during the past summer, will be shown at the 28th Exposition of Chemical Industries to be held at the Coliseum, New York, Nov. 27 to Dec. 1.



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- 1. **Analysis of Insecticides and Acaricides**, by Gunther-Blinn. 706 pages, 72 illus., 50 tables. Complete treatise on sampling, isolation and determination, including residue method. Price: \$16.00.
- 2. **Handbook of Pest Control**, by Arnold Mallis. New edition, 1132 pages, 26 chapters. Over 250 illustrations. Covers all types of household and industrial pests, insects, rodents, etc., their life cycles, habits, identification and the latest chemicals, methods and techniques for their control. Deals with rats and mice, silverfish, roaches, earwigs, termites, decay fungi, beetles, bedbugs and other bugs, clothes moths, bees and wasps, spiders, lice, fleas, flies, mosquitoes, mites, ticks and others. Price \$12.50.
- 3. **Surface Active Agents and Detergents**, by Schwartz-Perry. Two volumes. Volume I: 590 pages, illustrated. Covers processes for synthesizing and manufacturing surface active agents, physical chemistry of surface active agents and practical applications of surface active agents. Price: \$15.00. Volume II: 860 pages, illustrated. Covers processing for synthesizing and manufacturing surfactants, special function surfactants and compositions, the physical and colloidal chemistry of surfactants and practical applications of surfactants. Price: \$22.50.
- 4. **Detergent Evaluation and Testing**, by Jay C. Harris. 220 pages, 26 illus., 15 tables. A critical selection of methods and procedures for the testing of detergents. Price: \$4.50.

- 5. **Fatty Acids: Their Chemistry, Properties, Production, and Uses**. Second Revised Edition, edited by Klare S. Markley. New edition, in Four Parts, has been enlarged and brought up to date, covers the chemistry and the physical properties of the fatty acids, plus detailed description of processes for the production of fatty acids and their uses. Part 1: 724 pages, illustrated. Price: \$22.50. Part 2: 778 pages. Price: \$27.50. (Parts 3 and 4: In press).

## DETERGENTS

### DISINFECTANTS

## SOAP

### TOILETRIES

- 6. **Aerosols: Science and Technology**, by H. R. Shepherd, Edward Sagarin, et al. 562 pages, abundantly illustrated. Covers all aspects of the modern aerosols industry from manufacturing operations to applications in all types of products. Price: \$22.50.
- 7. **Systematic Analysis of Surface-Active Agents**, by Milton J. Rosen and Henry A. Goldsmith, Vol. 12. A series of monographs on analytical chemistry and its applications. (1960) 439 pages, 47 illustrations, 28 tables. Price: \$14.50.
- 8. **Handbook of Cosmetic Materials**, by Greenberg-Lester. 467 pages. Covers the properties, uses and toxic and dermatological actions of over 1,000 materials selected in response to a questionnaire sent to cosmetic manufacturers. Includes a chapter on the skin by Howard W. Haggard, Director, Applied Physiology Laboratory, Yale University. Price: \$14.50.
- 9. **Soap Manufacture**, by Davidson et al, in two volumes. Volume I: 537 pages, 66 illus., 118 tables. Covers the history of the soap industry, theoretical principles of soap manufacture, raw materials of soap manufacture and the fatty raw materials. Price: \$13.50. (Volume II in preparation)
- 10. **Cosmetics: Science and Technology**, edited by Edward Sagarin. 1453 pages, 138 illus., 107 tables. Covers origin, development of cosmetic science and discusses individual products such as hand creams, suntan preparations, skin lighteners, shaving soaps and creams, nail polishes and removers, deodorants, aerosol cosmetics and many other cosmetic and toiletry products. Price: \$19.50.
- 11. **International Encyclopedia of Cosmetic Material Trade Names**, by Maison G. de Navarre. Nearly 400 pages of the most complete listing of all the materials of the world used in cosmetic manufacture. Includes quick, concise descriptions of approximately 4,000 materials and the names and addresses of the suppliers, as well as a cross-index of the materials and their uses. Price: \$7.50.

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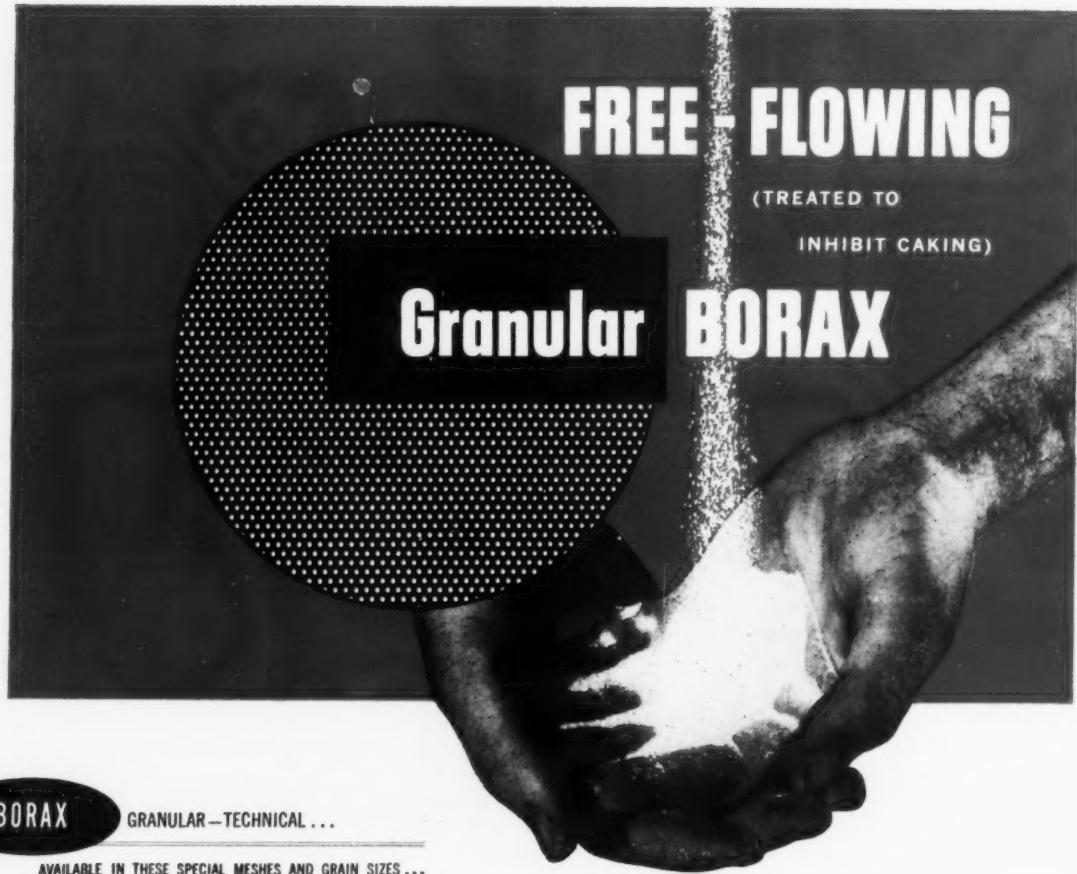
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Granular 30/100 (Special Mesh)	+ 30 Nil +100 86.7%	+ 35 none +100 min. 85%
Granular 40/100 (Special Mesh)	+ 40 Nil +100 89.0%	+ 40 max. 0.5% +100 min. 88%
Granular 40/140 (Special Mesh)	+ 40 0.1% +140 88.8%	+ 35 none +100 min. 50%
Granular 40/200 (Special Mesh)	+ 40 0.1% +200 84.1%	+ 30 none
Granular 60/200 (Special Mesh)	+ 60 0.1% +200 66.7%	+ 60 max. 1%
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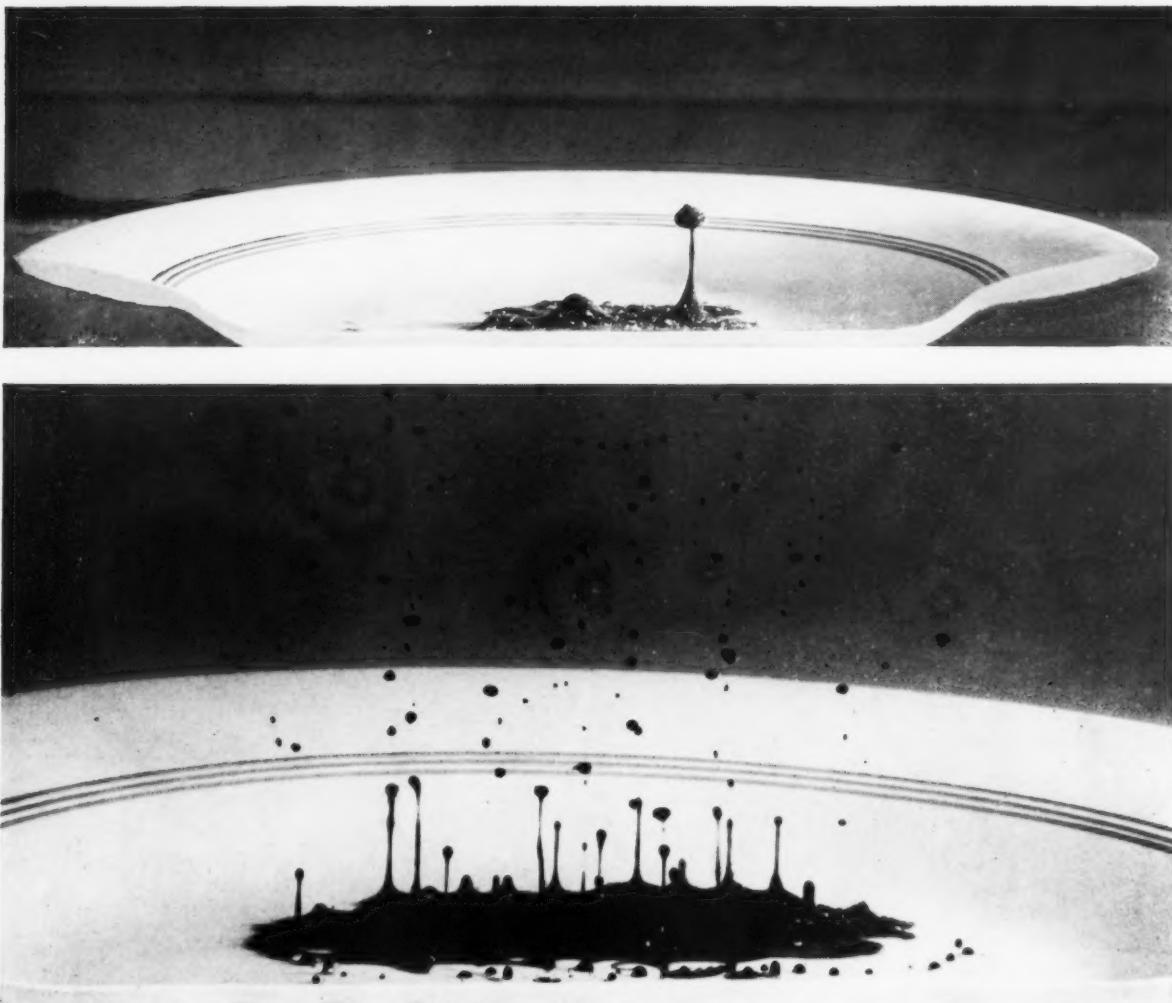


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Your own experience tells you that selecting the right components for a good detergent or other surface-active product is no simple task. As many as eight or ten components may be required, depending on the task to be performed and the variety of desired sales appeals. When it comes to formulation problems, Ultra can help you in more ways than one. Since Ultra manufactures one of the most complete lines of surfactants available from any one source, it can readily supply the components to meet your needs.

And with Ultra's unusually broad range of specialized alkyl aryl sulfonates, amine condensates, xylene and toluene sulfonates and other surfactants at your disposal, you'll have no trouble finding the sales-building combination of detergency, foaming power, viscosity, solubility and other properties you desire. Physical forms? Choose from powders, flakes, beads, gels and liquids.

As a start, send for our new master chart, "Ultra Surface Active Agents"—it's packed with useful information.

**Ultra Chemical Works, Inc., Div. of Witco Chemical Co., Inc., Dept. U-430, Wood Street, Paterson, N.J.**  
Plants in: Paterson, New Jersey, Chicago, Illinois, Hawthorne and Los Angeles, California.



# "turn on" more detergent sales with DEMA liquid controllers!



MODEL #183: Fixed Proportion  
MODEL #184: Adjustable Proportion

Stainless steel construction makes this Dema proportioner adaptable to a variety of products. Single push-button operation with *anti back-siphoning feature*. Attaches to faucet, connects to bulk container thru polyvinyl tube, gives perfectly proportioned mixture. Resets automatically to clear water.

Here's a real heavy-duty aluminum alloy and stainless steel dispenser designed for waterless hand cleaners and protective creams. Holds factory-filled disposable slip cover cans of any depth. Self-priming, self-lubricating suction pump is push-button operated. No gears or levers to get out of order.



MODEL #310-4: 4 1/4" Outside Diameter Cans  
MODEL #310-5: 5 1/4" Outside Diameter Cans



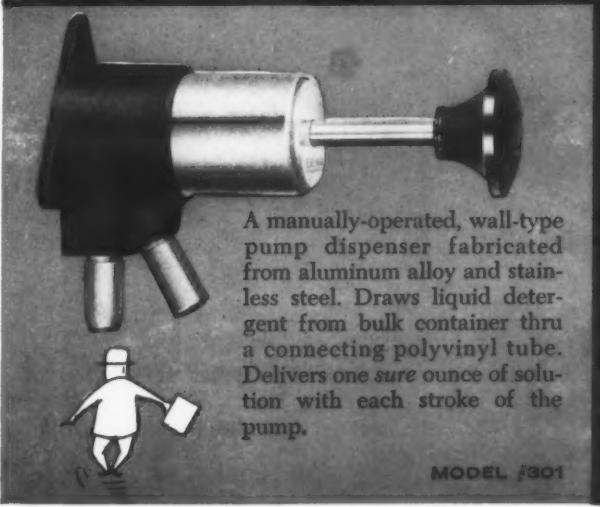
MODEL #189: Adjustable Proportion

This new dual proportioner by Dema does double duty, selectively, dispensing two liquid products. One push-button controls detergent . . . the other disinfectant. Attaches to faucet and draws fluids from bulk containers thru polyvinyl tubing. Has *anti-back-siphoning feature* and automatically resets to clear water.

A stainless steel constructed automatic liquid controller suitable for a variety of products. Single push-button operation. Attaches to faucet, draws liquid concentrate from any size container, dispenses it accurately in any desired proportion. Resets automatically to clear water.



MODEL #181: Fixed Proportion  
MODEL #182: Adjustable Proportion



A manually-operated, wall-type pump dispenser fabricated from aluminum alloy and stainless steel. Draws liquid detergent from bulk container thru a connecting polyvinyl tube. Delivers one *sure* ounce of solution with each stroke of the pump.

MODEL #301



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**ENGINEERING COMPANY**

Designers and Manufacturers of  
Automatic Dispensing Devices

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“... But only God can make a tree.”  
—Joyce Kilmer

# SOME ACHIEVEMENTS HAVE NEVER BEEN EQUALLED

Eventually man may find a substitute for pine trees. However, the day seems far off. As far off, in fact, as the day when a better product than Pine Oil will be discovered . . . as an ingredient for the soap and detergent industry . . . and as an all-around blending ingredient where high solvency performance is required.

Pine Oil's exceptional wetting properties, bactericidal properties, and safety make it one of the most important raw materials used in the manufacture of liquid detergents, soaps, laundry aids, general cleaners, disinfectants and deodorants. There are two good reasons for this . . . *Pine Oil smells clean . . . Pine Oil cleans clean.*

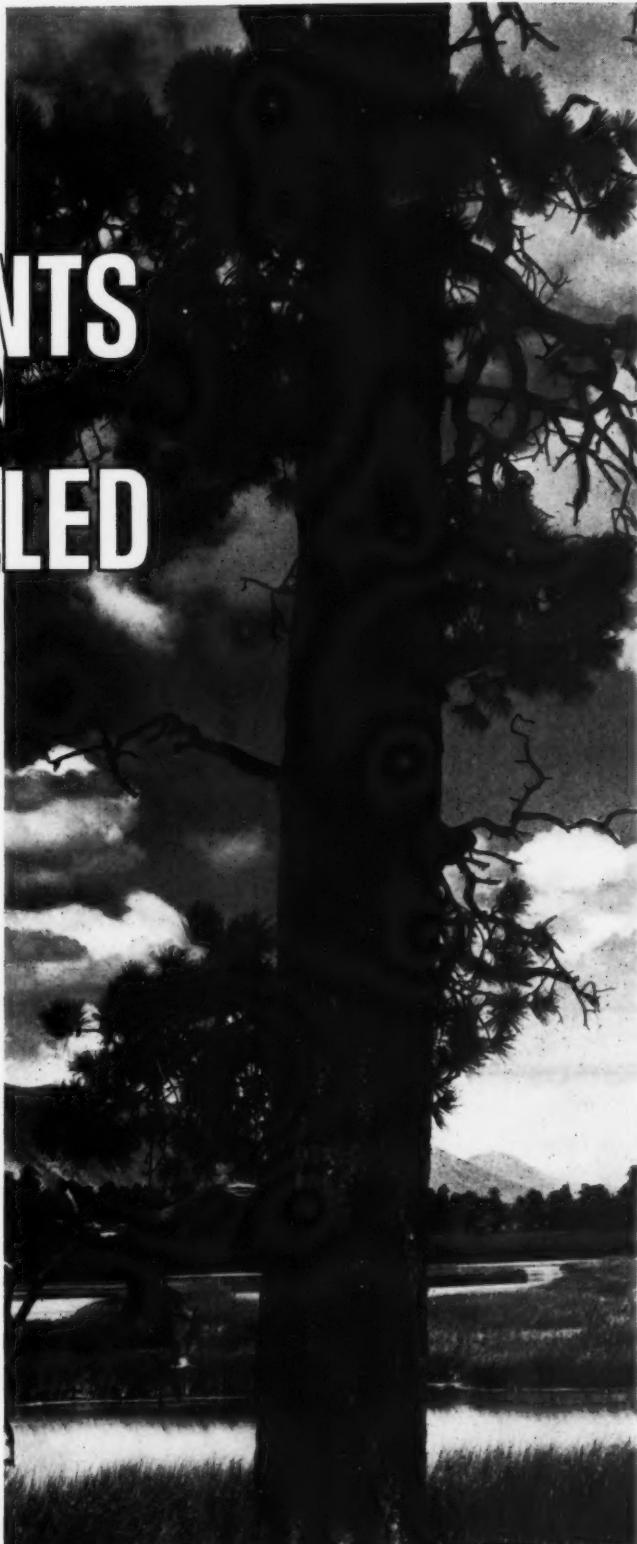
Look to Hercules for all the Pine Oil you need, because when everything is considered, Pine Oil still remains an outstanding ingredient for many diversified uses. Technical data is available by writing to Hercules.



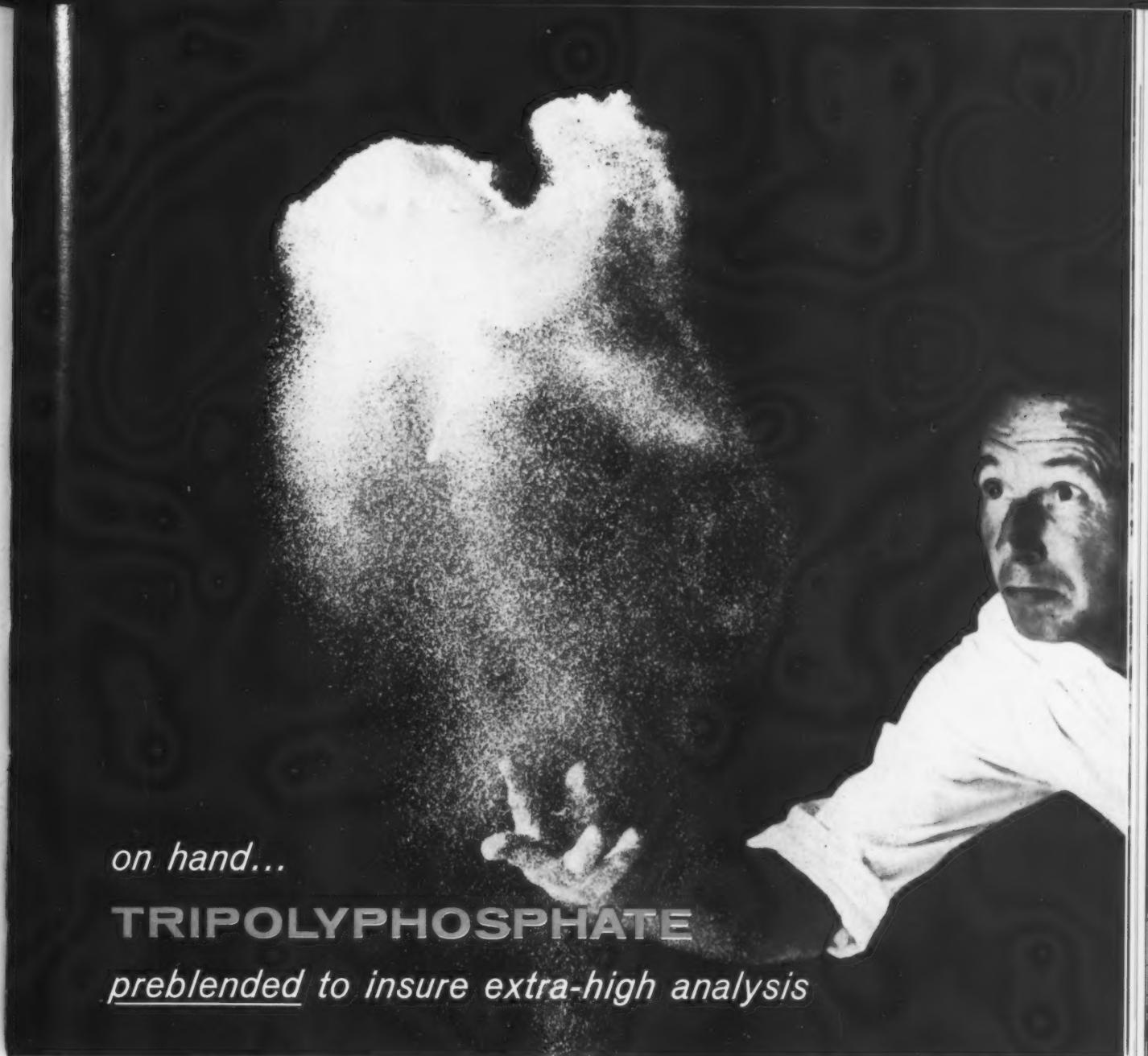
Pine & Paper Chemicals Department

**HERCULES POWDER COMPANY**  
INCORPORATED

Hercules Tower, 910 Market Street, Wilmington 99, Delaware



**The Pine Tree**—Some 90 species of pines are found in the U. S., two of which are among the most valuable trees to be found in all North America. These are the Longleaf Pine and its cousin, the Slash Pine. They grow principally in our Southlands and furnish rosin, turpentine, pine oil and other important basic products.



on hand...

## TRIPOLYPHOSPHATE

preblended to insure extra-high analysis

A new process is used to make AA Quality Sodium Tripolyphosphate. It includes a special operation that preblends the reactants before calcining. You benefit from the extra detergent strength that is developed and carried through to the finished product.

You also benefit from a free-flowing uniformity. It comes from the careful control built into thoroughly modern spray drying and calcining units. Send for production samples of this new "Tripoly" now!

*Top detergent quality in every granule...*

### AA QUALITY SODIUM TRIPOLYPHOSPHATE

AA QUALITY SODIUM TRIPOLYPHOSPHATE  
AA QUALITY TETRASODIUM PYROPHOSPHATE  
AA QUALITY TRISODIUM PHOSPHATE  
AA QUALITY DISODIUM PHOSPHATE

Chemical Division

**The American Agricultural Chemical Company**

100 Church Street, New York 7, New York



# A Must! For Manufacturers of Liquid Dishwashing Detergents!



If you now market or are planning to market a liquid dishwashing detergent for the home, institutional or sanitary supply field, it will pay YOU to look into KRYSTALLEX raw materials. Krystall Chemical is a basic producer of detergent raw materials and can custom-tailor detergents to your precise needs. Every day, KRYSTALLEX detergents find more and more applications in nationally-known products; in hand cleaners, shampoos, textile and floor cleaners, all-purpose cleaners. Krystall Chemical takes special pride in its prompt service on all surfactant requirements, whether it be for a drum, carload or tank car. Write today for full details and technical help on how to improve your product, expand your market, boost your profits . . . with KRYSTALLEX raw materials.

## SOME OF THE EXPANDING KRYSTALLEX SERIES

**Krystalex S-63** — A specially purified sodium dodecylbenzene sulfonate. Clear and odorless liquid. Excellent base for clear liquid formulations such as liquid dishwashing detergents.

**Krystalex S** — A dodecylbenzene sulfonic acid.

**Krystalex S-75** — An ammonium alkyl phenoxyethylene sulfate.

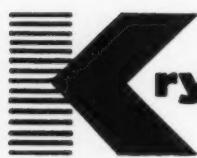
**Krystalex LA** — A 100% active non-ionic fatty acid alkanolamide manufactured for use as a foam stabilizer.

**Krystalex C** — A sodium lauryl sulfate—characterized by its uniform high viscosity—excellent base for creme shampoos.

**Krystalex A** — A sodium lauryl sulfate with a very low salt content and low viscosity.

**Krystalex T** — A triethanolamine lauryl sulfate. High activity, low cloud point, very light color and color stability toward light.

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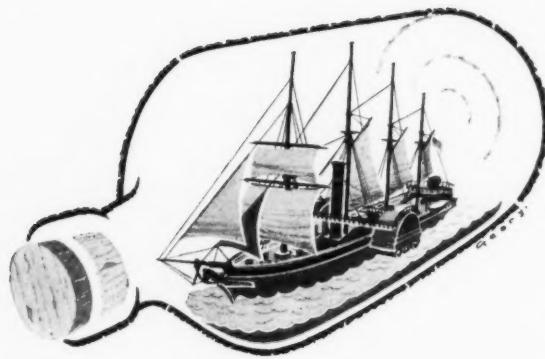


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50%-73%



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AND MARCHON SURFACTANTS PLAY A BIG PART IN IT**

It's plain sailing for chemical manufacturers in many parts of the world, for Marchon ships much of its output of surfactants to overseas customers. Buyers in more than 50 countries rely on Marchon's raw materials.

**PRIMARY FATTY ALCOHOLS**

These are essential raw materials for a large number of chemical processes, and are of special importance to the cosmetic and detergent industries. Marchon are the only manufacturers in Great Britain with the full range of C8-C18 even-numbered homologues. Why not write for data, samples or advice?



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51

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## How to put more pH into cleaners and detergents

When you want to make a cleaner or detergent that really digs at dirt and grease, add the alkalinity of Hooker trisodium phosphate to your formula.

A 1% solution of this highly pure phosphate has a pH of 12.0. This white, crystalline product is almost utterly free of contaminants. Iron is nil. There's just a trace of  $\text{SO}_3$ . And there's less than 10.0 ppm of fluorine.

The crystals are compact, too. Bulk density is a high

54.5 lb/ft<sup>3</sup>. The crystals are non-dusting and dissolve quickly into a solution without haze.

Just write to your nearest Hooker Phosphorus Division office for complete data and prices on trisodium phosphate and these other fine Hooker phosphates—disodium phosphate, sodium tripolyphosphate, sodium hexametaphosphate, tetrasodium pyrophosphate, and tetrapotassium pyrophosphate.

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OUR  
STRENGTH  
IS  
HER  
WEAKNESS

EWING GALLOWAY PHOTO

Ever notice a woman at a cosmetic counter? No matter what she buys—lipstick, face powder, soap—she does one thing with every product—she smells it. That's right—the fragrance is the final test. That's why, in some cases, she can tell you which product she likes better blindfolded—she buys by the fragrance. We at Perry feel that our imaginative skill in the art of perfumery—and it is an art—may well help lagging sales for your product.

Whether your product comes in a bottle or a barrel, whether it's sold in a drug store or paint shop, an analysis of its fragrance by a Perry expert can mean added sales potential. We welcome the opportunity to submit appropriate samples.



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*"Manufacturing Perfume Chemists"*  
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**RAvenswood 1-3636**

# as the editor sees it....

## AFFIDAVITS OR WHAT?

Manufacturers who are strong in opposition to so-called approved lists of products have recently approached hospital, hotel, motel, restaurant and other associations to register their disapproval and to urge the associations to abandon the idea. Invariably the answer has been the same. "If you oppose approved lists what do you have to offer in their place?" Frankly, we don't feel that there is anything to be offered to the buyer which he as an astute and careful buyer should not already have used, — specifications, periodic testing of shipments, reputation of supplier, suspicion of too low prices, etc.

Some manufacturers have suggested that buyers and their trade associations require affidavits that products meet this or that specification, — specification to be selected by the buyer, GSA, Navy, commercial standard or ones set up by the buyers' associations. If periodic testing shows products meet the specifications chosen, the buyer supposedly pays for the tests. If otherwise, the supplier pays for the tests and the goods are rejected.

This might be one answer to the question, but we have our doubts that the buyers' associations will go for it. Frankly, we feel they are looking for an easy way out and would rather choose approved lists, even though they are obviously no real protection to the buyer or his employer.

\* \* \* \* \*

## NEW REGULATIONS

New and revised regulations have been issued by the Food & Drug Administration covering enforcement of the Hazardous Substances Labeling Act. Certain label type sizes have been reduced, placement of caution statements has been changed, some rigid tests have been revamped, and other changes have been made, all along the line suggested by industry. From the manufacturer's viewpoint, the revised regulations are a marked improvement over those originally issued even though they may entail hardships for marketers of some types of products.

SEPTEMBER, 1961

Whether the enforcement date of the new law will be postponed beyond February 1, 1962 is still a moot question. The Chemical Specialties Manufacturers Association suggests that February 1, 1963 is a more logical date inasmuch as it will be physically impossible to revamp labels on thousands of household chemical products and get them to market before another year or more has rolled around. Back-door word from Washington is that FDA does not favor such postponement, but if industry brings the matter before Congress to extend the enforcement date, such action will not be actively opposed.

To those manufacturers who are not members of CSMA and who showed many signs of panic when the new regulations were issued, let us say that the efforts of CSMA have been mainly instrumental in saving them from complete label chaos. Without the united fight put up by CSMA, the industry would have been snowed under completely.

\* \* \* \* \*

## PESTICIDE CONTROL

Some of our leading newspapers seem to be going off the deep end again in calling for stricter controls in the use of insecticides and other pesticides. Some crackpot writes a letter to a newspaper and they pick up the cry that the widening use of household pesticides is a menace to the public health, may be the underlying cause of all diseases from cancer to dandruff. It happens periodically. And the newspapers which fall for this sort of bunkum are the big city papers, — the boys who are supposed to be meticulous in substantiating their facts and experts in avoiding bum steers from the uneducated and the uninformed.

Remember the blood-curdling series in the Scripps-Howard papers of some ten years ago on how America was being poisoned and made cancer-ridden by DDT? Well, something of a similar rash of malarkey has recently come forth in several leading newspapers, including the *New*



# Whether your product cleans ceilings or silver

Whether it's gentle enough for her finest silver...or tough enough to handle a real grease cutting job, Victor phosphates can play a man-sized role in its production.

Victor chlorinated TSP, for example, increases cleaning with *bleaching* action. And if your problem is one of *density*, you'll find VICTALITE, a new low-density, sodium tripolyphosphate (35 lb. cu./ft.) worth trying. We can, of course, supply higher ranges (40-63 lb. cu./ft.) for most any *rate of solution* requirement.

Soapers know, too, that Victor's top-quality sodium and potassium phosphates are available in money-saving bulk shipments or economical mixed truckloads. So whichever you prefer you'll find...as many others already have...

IT *Pays*  
TO SEE VICTOR  
FOR PHOSPHATES

**V** **VICTOR**  
*Chemical*  
DIVISION OF STAUFFER CHEMICAL COMPANY

155 N. Wacker Drive, Chicago 6

*York Times.* We note with interest that some reader answered with a tough letter.

Why the newspapers will periodically go for this pesticides-poisoning-the-nation line, we don't know. Why, before they publish this drivel, do they not consult the U. S. Public Health Service, the U. S. Department of Agriculture, state or local health officials? Or maybe they would prefer that the country be overrun with flies, mosquitoes, bedbugs, roaches, moths, et al. The American public is about as well protected from the misuse of pesticides as any nation on the face of the globe. Maybe we are remiss in not tipping off the newspaper editors to this fact.

\* \* \* \* \*

#### SALES RECORDS

For the third consecutive year, first-half sales of soaps and detergents hit a new high in 1961. Compared with 1960, sales were up 2.1 per cent in volume and 2 per cent in value. Detergent sales were higher by some 4 per cent over-all with the liquids showing a gain of 13.2 per cent. Soap sales continued their downward trend, losing about 4 per cent in volume. Once again, the only bright spot in the soap picture were toilet soaps which increased 2.2 per cent. Old fashioned bar yellow soap took a sharp drop and has just about disappeared from the detergent scene. Scouring cleansers which had previously shown a decline were up a healthy 9.2 per cent in volume for the first half of 1961.

All told, we would conclude, these figures of the Association of American Soap & Glycerine Producers show that soap sales, and likewise consumption, continue in a very healthy category. We guess that detergents and soaps are here to stay for a while.

\* \* \* \* \*

#### DIAPERS

Maybe in time disposable diapers will outmode the wash tub. In the meantime, however, we note with keen and unusual interest that the National Baby Care Council has issued instructions on the correct method to "process" diapers at home. This so-called process calls for three rinses in clear, hot water before washing followed by four separate sudsings. This in turn is followed by six (count 'em) rinses in clear hot

water to remove all soap and detergent. After this procedure, it is then recommended that the diapers be boiled for 30 minutes. And then, — don't lose hope yet, gentle reader, — "the sterilized diapers are then rinsed in vinegar-water to make sure they are not alkaline."

What amazes us is that there is no added provision in the "process" for removing the vinegar if in excess. Maybe it's intended that our freshly diapered babies should emit the aroma of pickled herring or salad dressing. Be that as it may, fifteen steps (count 'em) for home diaper washing should be enough to discourage the most diligent young mother. We suggest that any further publication of this "process" be suppressed in the interest of harmony in the American home. We also suggest that the insidious influence of the diaper washing services and the fellows who make these disposable diapers could be detected here by anybody with a mind a bit on the suspicious side.

\* \* \* \* \*

#### TOO LATE?

Sales of household insecticides during the past summer left something to be desired. In checking with insecticide marketers, the reasons given are numerous and varied. They include: A cool spring, carryover of large inventories from 1960, poor economic outlook, "too expensive" (for aerosols), few bugs.

Although it is still too early to assess the effects of heavy mid-season advertising and promotion of bug-killers, the nagging thought, "Did it come too late?", keeps popping up. What would have happened if this year's advertising had gotten underway earlier — instead of being held back to push accumulated stocks?

Unlike so many other chemical specialties, with insecticides, the housewife invariably waits until she actually needs the product before buying. If she could be made aware before the season that at some time during the warm weather she *will* have a bug problem, she might be persuaded to buy the stuff earlier, maybe use more of it and possibly reorder.

Over the years household insecticide marketing has, with a few notable exceptions, been a somewhat hit or miss affair. Possibly this is the nature of the business.

# SANDELA

## *An Important Breakthrough in Perfume Chemistry*

The tenacious woody notes of Sandalwood... subtle fragrance of the mysterious East... are now completely captured by Sandela.

For years perfumers have sought to find a truly functional chemical body to replace the rare and costly natural oil... until today... until Sandela by Givaudan. For here at last is a completely successful, fully tested alternate for the natural Sandalwood oil in just about every application... soaps, perfumes, powders, creams, detergents, aerosols. The availability and economy of Sandela place the admired Sandalwood note at the perfumer's unrestricted disposal. It is destined to become one of your most valued aromatics.

**GIVAUDAN-DELAWANNA, INC.**

321 West 44th Street, New York 36, N. Y.

SANDELA—REG. U. S. PAT. OFF.

## as the reader sees it...

### Re Propellant 11

Editor:

In the May issue of your journal *Soap and Chemical Specialties* we find on page 193 a book review entitled "New Edition of British Aerosol Book" which mentions "Frigen 11" made by our firm.

Unfortunately the passage dealing with "Frigen 11" contains some statements which could create a wrong impression in the reader's mind concerning the possible uses of "Frigen 11."

We would appreciate your publishing in one of your future issues the following statement explaining our position:

"The regulations governing manufacture of pressurized packages (aerosols) in Germany were published by the German Compressed Gas Committee (Deutscher Druckgasausschuss). These regulations were set up in accordance with the German Compressed Gas Ordinance. This ordinance covers containers for condensed and liquefied gases. Liquefied gases include those exhibiting excess vapor pressure exceeding 1.25 kilo/cm<sup>2</sup> at 40°C. Propellant 11 (trichloromonofluoromethane) has an excess vapor pressure of only 0.78 kilo/cm<sup>2</sup> at 40°C. Therefore "Frigen 11" is outside the scope of the German Compressed Gas Ordinance. It is for this reason that "Frigen 11" was not included in the draft for the regulations covering manufacture of aerosols in Germany. These facts make it obvious that "Frigen 11" continues to be admitted for use in pressurized packages.

"Frigen 11" (trichloromonofluoromethane -  $\text{CFCI}_3$ ) is chemically identical with such analogous propellants as "Freon 11", "Genetron 11", "Ucon 11", etc., and therefore exhibits the

same chemical properties. It is generally known in the field of aerosol technology that trichloromonofluoromethane is not for use in products which contain water. The argument that poisonous alcohols might thereby be formed, is thus of no practical significance."

For your own information we are enclosing the latest draft of the ordinance governing manufacture of aerosol packages.

We thank you in advance for your willingness to publish these supplementary data on our "Frigen 11".

FARBWERKE HOECHST AG.  
Frankfurt (Main), Germany

### "Alkane" Trademark

Editor:

The trademark matters of California Chemical Company, Oronite Division, are handled by us and it was with a great deal of interest that we read the article on liquid detergents in the July, 1961, issue of *Soap and Chemical Specialties* magazine.

However, in the second sentence of the article it is stated that "The main reason for the popularity of alkane..." Since "Alkane"

is California Chemical's trademark for its detergent intermediate, its use in lower case lettering and without an appropriate generic, e.g., "detergent intermediate," is improper from a trademark protection standpoint. As you may know, it was through such improper usage that the once valid trademarks "aspirin", "cellophane" and "escalator", to name a few, were lost and became public property.

Accordingly, in any future uses of "Alkane", California Chemical would very much appreciate your showing the trademark in solid capital letters, or at least with a capital "A", and following it with the generic "detergent intermediates."

Please do not construe this as a criticism of the article, which California Chemical informs us is excellently written and undoubtedly proved most informative to those who read it. \* \* \*

A. L. Snow,  
Attorney at Law  
San Francisco, Calif.

*In the future we shall call attention to the fact that "Alkane" is a trademark by using the upper case "A" and put the word in quotation marks as is our style in handling trademarks. Ed.*

Edward J. Breck, president of John H. Breck, Inc., Springfield, Mass., and Mrs. Breck, recently returned from a month-long trip to the Far East. They departed from San Francisco via the S. S. President Cleveland in late May, bound for Japan. En route they stopped to visit with Breck distributors in Hawaii.



# FOR TOP PERFORMANCE FROM EVERY FORMULATION...

1.

**Use Procter & Gamble  
products**

2.

**Use Procter & Gamble  
formulation assistance**



K LIQUID. A highly concentrated modified ammonium lauryl sulfate—formulated for increased sudsing and mildness. Exceptionally low cloud and pour points—highly fluid and easy to handle. Ideal for clear liquid shampoos, liquid bubble bath preparations, and liquid detergents when high foaming is required.



AB GRANULES. A neutral synthetic detergent, wetting and emulsifying agent of the 40% active sodium alkyl aryl sulfonate type. A white spray-dried product that can be used effectively in the blending of bubble baths, car body shampoo, dishwashing compounds, dairy cleaners, insecticides, laundry detergents, rug and upholstery cleaners.



WA PASTE. A neutral synthetic detergent and wetting agent whose active ingredient is mainly sodium lauryl sulfate. Excellent sudsing, wetting, dispersing and penetrating properties. Ideal for paste cream and liquid cream shampoos, bubble baths, liquid detergents, liquid floor cleaners, insecticides, glass cleaners, and especially effective for rug and upholstery cleaners.



AMBER GRANULES. A neutral 88%\* 42°C. titer type soap of outstanding purity and uniformity. Well suited for the preparation of paste or gelled products because of its high titer. Its granular form makes it ideal for blending powdered products. Excellent for the compounding of hand cleaners, paste cleaners, polishes, and lubricants.



ES PASTE. A specially developed synthetic detergent whose active ingredient is mainly modified sodium lauryl sulfate. Offers exceptional efficiency and stability over a wide range of operating conditions. Its excellent wetting, penetrating, sudsing, dispersing and emulsifying properties make it well suited for the preparation of liquid shampoos, bubble baths, liquid detergents, liquid floor cleaners, insecticides, car washes, emulsion cleaners.



KYRO EO. A neutral nonionic synthetic detergent of the 100% alkylphenol ethylene oxide condensate type. A clear light-colored liquid with a clean, pleasant odor. Its superior detergent, wetting and emulsifying properties offer excellent performance in liquid detergents, sanitizer-detergents, self-emulsifying solvents, laundry detergents, glass, textile, and dairy cleaners, insecticides, and bottle washing compounds.



IVORY BEADS. A medium titer, neutral spray-dried white soap of exceptional purity and quality. Well suited for compounding products where a mild but effective soap is required—hand soaps, polishes, protective creams, and dishwashing compounds.

Procter & Gamble products offer you a proven way to simplify your formulation problems and be confident of successful results. We invite your inquiry for further information and the opportunity to forward an Industrial Catalogue. Write to:



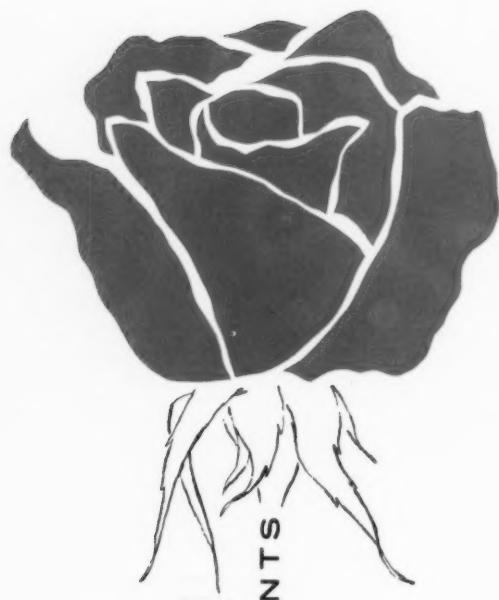
**PROCTER & GAMBLE, Manager, Bulk Soap Sales Department, P. O. Box 599, Cincinnati 1, Ohio**

# Detergents . . . Cleansers . . . Soaps . . .

Aerosols  
Detergents  
Dishwashing compounds  
Floor scrubs  
Glycerine  
Hand cleaners  
Laundry soaps  
Liquid soaps  
Medicinal soaps  
Metal cleaners  
Potash soaps  
Scouring cleansers  
Shampoos  
Shave products  
Soap powders  
Starch  
Steam cleaners  
Textile detergents  
Toiletries  
Toilet soaps  
and other detergent  
and soap products

Detergents in tablet form, such as "Vim," an entry of Lever Brothers Co. in the detergent marketing derby, are being watched closely by soap marketers. Big appeal to housewives is measured dosage, lack of spillage, and convenience. See article beginning on page 55.





NORDA MAKES GOOD SCENTS

**Norda**®



**Exclusive Basic Materials for: Perfumes, Cosmetics, Colognes, Soaps**

*Write on your letterhead for free samples:*

NORDA, 601 W. 26 St., New York 1, N.Y. • Chicago • Los Angeles • San Francisco • Toronto • Montreal • Havana • London • Paris • Grasse • Mexico City

New three-cake box of "Maja" toilet soap of "Myurgia" S. A., Barcelona, Spain. Soaps of this firm are noted for their perfuming. Box of hand size cakes shown is for export market.



## Changing Fashions in SOAP PERFUMES

By F. V. Wells\*†

WHEN I mentioned the title of this paper to my wife she said, "But why all the fuss about new types of soap perfume? Has there really been a significant change of fashion? All that I have noticed is that some of the newer toilet soaps have perfumes that are too strong and too sophisticated. Soaps should have light, clean and refreshing odors, corresponding to their proper function, which is presumably to remove dirt and leave behind a fleeting suggestion of freshness. Toilet soaps cannot, by their nature, replace handkerchief perfumes and toilet waters—so why pretend that they can, and overload them with perfumes that are sickly, cloying and inappropriate? Some of the domestic washing pow-

ders and liquid detergents are also too heavily perfumed."

That, of course, is only the opinion of one woman, though it is naturally an opinion that I respect. Among those who appear to be in general agreement is that outspoken member of the Belgian perfumery industry, Mr. Klaas Sluys of Boechout. Recently, he says, "one of the greatest soap manufacturers launched a new toilet soap of a blue color with a perfume that is much too strong . . . People wash to refresh themselves and therefore all strong perfumes are entirely wrong, especially in the morning!"

Are these, however, the views of the majority? Frankly, I do not know. In the kind of society in which we live, what the customer may or may not want is subordinated by means of propaganda to what he or she may be persuaded to buy. The first requirement of any successful com-

modity, whether a soap, a perfume or a motor car, is not that it shall be of a certain quality but that it shall make a profit. And I need not stress in Paris, the very home of fashion, how profitable frequent changes in fashion can be. So far as toilet soaps are concerned, there is at least a determined and persistent attempt being made in some quarters to popularize perfumes that are, in effect, imitations of sophisticated *extras*.

Leonard Stoller, in an American survey published late in 1960, described this change in fashion in the following terms:

"During the 1940's the emphasis was on clean-smelling soap odors and pure white cakes . . . In the decade that followed there was a major shift to reorientate the soap cake toward luxury and fashion. There began a new trend in toilet soaps with the introduction of new odors in old soaps and new bars with scents heretofore

\* Paper read as "Les Parfums modernes pour savons suivant la mode," at the Journée Technique du Parfumage du Savon, organised by La Société Technique des Parfumeurs de France; Paris, May 27, 1961.  
† Consulting Perfumer; Editor of *Soap, Perfumery & Cosmetics*, London.

never used in soaps. Where the advertising emphasis had previously been placed on the purity and cleaning power of the bar, the consumer was now being attracted by the pleasant perfume which brought Paris into one's bathroom.

"This new trend to more fanciful and original perfumes for soaps gave the perfumer a somewhat free hand in selection but, at the same time, made his task more difficult to accomplish . . .

"The modern soap cake is characterized by . . . alluring perfumes, luxurious feel and lather, and eye-appealing color. The color serves two purposes. It permits the soap to be promoted as an item of decoration as well as function. And, more importantly, from the perfumer's point of view, it allows the use of . . . aromatics previously avoided because they caused discoloration in white cakes . . ."

At this juncture I would like to point out that the present paper is not intended to be a discussion of technical problems associated with the perfuming of toilet soaps\*, but rather a review of what is actually happening today: what new odorants are being used in, and what (if anything) distinguishes the soap perfumes of to-day and perhaps to-morrow from those of yesterday.

I propose to deal with this subject by looking, first of all, at some of the newer chemicals pre-eminently suited for the perfuming of soaps. Proceeding from raw materials to finished products, I shall next glance at some of the newer toilet soaps that have appeared on the European market during the past few years. Thirdly, I shall briefly consider the subject of perfuming textiles, in so far as it concerns the use of soaps

\* Anyone interested in my views on the technology of soap perfumes may be referred to some articles that I wrote a year or two ago for an American journal. From the chemical and physical points of view, I can more confidently and impartially recommend certain publications by Jack Pickthall and Jean Sifras — and particularly the paper presented to-day by Dikran Dervichian. Also well worth reading on the subject of soap perfuming in general, are various papers by E. D. Kilmor, Francois Harlan, Benno Streshnak, Samuel Klein, Edmond Gorokhoff, Victor Fourman, Horst Schmidt and S. Amlacher. I have listed these items in the appended bibliography. —F.V.W.



Final check of a perfume compound prior to shipment is made by the head of quality control of Fleuroma, Inc., perfuming materials firm. Samples of compounds on shelves are compared with products about to be shipped.

and detergents for that purpose.

Let us begin by attempting to classify a selection of the newer odorants by considering them under various headings such as Jasmin, Rose, Lily-Lilac, Woody and Fruity Notes.

#### Jasmin

Jasmin-fruity effects, long obtained with amyl and hexyl cinnamic aldehydes and benzyl esters, may now be powerfully reinforced with Vertenex, whose green, fruity and rather woody odor is reminiscent of vetivert and pineapple. To one eminent perfumer, it suggests cut grass and jasmin. Said to be *cis*-para-tertiary butyl cyclohexyl acetate, it is already used in large quantities in modern toilet soap perfumes and is a product that no soap perfumer can afford to ignore. Its intensity and persistence are equally remarkable.

Acetamyle, described as fundamentally an acetate of a substituted cyclohexanic alcohol, may similarly be classified as a fruity jasmin type of odorant, although it has other applications in tuberose, gardenia and glycerin-and-cucumber perfumes. It has good stability in toilet soaps, and I have used it to impart a fruity character to fern and water-lily soap perfumes.

Also of interest in the creat-

ing of jasmin perfumes of this type is Jasmedia, a stable ester of sharp, pungent odor suggestive of both benzyl and butyl osmophores. I have not yet examined the non-anediol acetate known as Jasmonyl, but this, too, might have applications in soap perfumery.

#### Spicy Notes

One of the most unusual of the newer specialities suitable for use in soaps is Cyclenone, a cyclohexenic ketone. Its spicy odor, recalling lovage, celery and fenugreek, suggests that it might prove particularly useful as a constituent of soap perfumes of the following types: carnation, tabac, oriental, and other blends for mainly masculine use, including modified Jockey Club and Indian bouquets and American-type spicy blends for shaving soap.

#### Rose

The so-called Dibutane-acetal, a recently reintroduced cyclic acetal of heady "green rose" odor, with a chloroform-like shading, has very good stability in soaps and detergents.

Iso-Cyclo-Citral varies considerably in odor according to source. One grade has a citrus-herbaceous note, like the corresponding citral acetals, whereas another has a fresh rosebud quality, and

should prove quite useful in soap perfumes.

Rosalva, a product with an alcohol function but an aldehydic character, is rather expensive, but small quantities add to the lifelike flower effect in certain rose perfumes and in gardenia. It also blends well with the ionones.

Geranyl Acetone, now produced commercially for the first time, has an odor of apple-rose type and is remarkably stable in soaps and other detergents.

#### **Lily-Lilac**

The value of cyclamen aldehyde in the perfuming of soaps is too well known to call for comment, but due note should be taken of the methyl derivative, Lilial, which gives very full, sweet and characteristically floral effects in soaps, and is extremely long-lasting.

Several of the acetals of hydroxycitronellal, cyclamen aldehyde and phenylacetaldehyde are all of interest here and in floral bouquets generally.

Lyral is another useful specialty in this group. Although aldehydic, it lasts well in toilet soap perfumes and is more diffusive than hydroxycitronellal.

Ethyl linalol and its acetate may also be mentioned under this heading. They are of considerable interest in most branches of perfumery.

#### **Woody and Fruity Notes**

I have already spoken of Vertenex and Acetamyle under the heading of Jasmin. They might be even more appropriately included as bases for Fruit Vert types and other fruity and woody compositions. Certain clove, cedar, pine and lemongrass derivatives come into this category of woody and fruity notes, but in some cases I have included them in other groups.

Odorants with a sandalwood odor, such as Sandela, have naturally aroused interest, owing to the prevalent high price of East Indian sandalwood oil. I have several of these products under test at the

present time. They should be carefully evaluated from all points of view, their dermatological suitability being just as important as their chemical stability in the various media. Sandela itself certainly exhibits strength and stability in soaps and synthetic detergents.

The characteristic odor of allyl ionone comes up well in Cetone V, when the latter is included in proportions of 5 per cent, for example, in appropriate soap perfumes. Cetone V has a mildly exalting effect, imparts sweetness and emphasizes any woody notes that may be present.

Myrcenyl acetate might prove of interest if it were available in commercial quantities. The product known as P. L. A. or pseudo-linalyl acetate has a richer, fuller odor of sweet fruity-floral type, but with a suggestion of nutmeg. Of a more woody, terpenaceous character is the same firm's Alloetyl Acetate. Although powerful, fresh and persistent in milled toilet soaps, this ester unfortunately shows signs of being withdrawn from the market.

Other acetates whose odors to some extent resemble the foregoing are nonyl (lignyl), menthanyl and — more remotely — ethyl linalyl acetates. The first two suggest lavender, petitgrain and terpinyl acetate. They can be used in quite high proportions in toilet soap perfumes, giving clean, refreshing odors that show good stability and cover the smell of the soap base effectively.

Useful in mere traces in woody perfumes of the pine needle type is 3-hydroxy-2-methyl-4-pyrone, known also as Corps Praline, Maltol and Palatone. This imparts a peculiar sweetness that much improves conventional blends, but it has to be used, of course, with extreme care. And it is also very sensitive to metal contaminants.

I was hoping at one time to experiment with the Pentiones, new ketones and secondary alcohols related chemically to the ionones and protected by U. S. pat-

ent 2,799,706, which quotes 4-(2'-methyl-5'-isopropenyl cyclopentene-1'-yl)-butanone-2 as typical. These products have been said to give interesting citrus, woody and amber effects in milled toilet soaps. I regret to note that they have been temporarily withdrawn from the market, owing to an improvement in the firm's beta ionone — Vitamin A process.

Dicyclamyle, a bicyclic nitrile of good stability, has a slightly spicy, woody odor, suggesting its utility in sandal, cedar, fern, chypre, opopanax and perfumes for men.

Also of interest in this group are the fruity esters: allyl cyclohexyl propionate and the acetate, formate and butyrate of 3:5:5-trimethylhexanol (covered by British patent 810,748: "Perfumes Compositions," specially suitable for use in soap and synthetic detergents.) Nor must one overlook the now freely available Fenchone and Fenchyl Acetate, very useful in cheaper soap perfumes for their woody, herbaceous and camphoraceous character.

#### **Musk and Ambergris**

One of the major problems of soap perfuming has hitherto been the difficulty of incorporating a sufficiency of musk, owing to the coloring propensities and poor solubility of the conventional nitro-musks. It has since become possible to overcome this problem and to achieve a smooth, delicate yet forceful musk-like odor with the aid of some of the newer musks. Early on the scene was the light-stable Musk Tibetene: 2,6-dinitro-3,4,5-trimethyltertiary butyl benzene. Although a nitro-musk, this compound is less prone to cause discoloration than other members of the group and is, in fact, suitable for use in white toilet soaps.

Macrocyclic and polycyclic musks have been the subject of world-wide research and development. As Hackforth-Jones has pointed out, the range of musk-like odorants (using the term "musk" in its widest sense) now

includes such important materials as Astrotone, Celestolide, Cervolide, Cyclolide, Ethylene Brassyate, Exaltolide, Fortolide, Musk B. R. B., Musk D. T. I., Pantolide and Versalide. And there are several others. A typical substituted butyl indane compound, for example, has a uniform and consistent odor, freedom from metallic off-notes, blends well with other aromatics and has excellent stability. The use of one per cent of such a musk in a soap perfume imparts sweetness and "lift," and in this respect is quantitatively as well as qualitatively superior to the nitromusks. Lower proportions are also useful, with or without the accompaniment of musk xylol or Musk Tibetene. Musks, however, are often very inefficiently used by soap perfumers. In this respect I largely agree with the published views of Francois Harlan.

The ambergris background odor, much sought after but hitherto impossible to achieve either with the excessively costly tincture of the natural substance or with labdanum and other partial substitutes, may now be imparted to soaps with Fixateur 404, the powerful precursor of Grisambrol. Let the soap perfumer unacquainted with the use of this substance compare the effect of using one per cent of benzyl salicylate in a milled toilet soap with one per cent of a one per cent solution in benzyl salicylate of Fixateur 404. The difference is quite startling and of outstanding interest. Although Fixateur 404 is relatively expensive, the one per cent solution (either in benzyl salicylate or in some other suitable diluent) comes well within the costing requirements of the majority of good soap perfumes.

#### Miscellaneous

Difficult to classify, because it is essentially fruity and yet also suggests pepper, walnuts and leather, the product known as Ester Tetrahydrobenzoïque may well prove interesting, especially in modified lavender, cedar and cuir de Russie perfumes for men. It is

said to have good stability in soaps.

Adoxal, a derivative of lemongrass oil via the pseudo-ionones, intensifies green leafy notes. It gives interesting results in soaps, even when used in quite small quantities, and is extremely stable.

Cyclonitrile, a cyclohexenic nitrile having a branched unsaturated chain and a sweet, fruity odor vaguely suggestive of orange, has good stability in soaps and blends well into verbena, Cologne and many other compounds.

The aldehydic shading so often desired in modern soap perfumes can frequently be enhanced and stabilized by the appropriate use of several of the materials mentioned elsewhere in this discussion. Particularly useful in this respect are several of the more recently introduced esters and other products of a higher degree of volatility than was once considered practicable for use in soap perfumes.

#### Essential Oils

Mounting costs of land and labor exercise a constantly restrictive effect on essential oil produc-

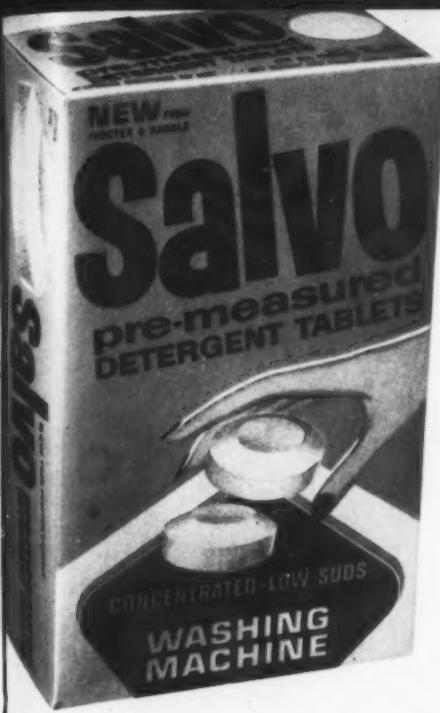
tion throughout the world. Hence the importance of the newer and frequently more competitive odorants of synthetic origin, made available as a direct result of advanced research in applied organic chemistry. The larger soap and synthetic detergent companies, who annually use vast quantities of perfumery materials, are always trying to reduce their dependence on essential oils and other materials of natural origin, and in many cases will not even consider the use of a natural oil unless they can be guaranteed sufficient supplies for years ahead. Here the smaller manufacturer, dependent on a local or otherwise more specialized market, may sometimes be well advised to take a risk denied to the colossi, by making good use of oils in relatively limited supply.

For essential oils are still indispensable as natural bouquets, and there are still opportunities for the development of the less conventional oils, particularly in China, India, Africa and South America. I am thinking, for ex-

(Turn to Page 123)

Perfumer in laboratory of Givaudan-Delawanna, Inc., sniffs one of the raw materials while he is creating a new aromatic mixture.





Procter & Gamble Co. is putting major promotion efforts behind "Salvo", its low sudsing premeasured detergent tablet for use in clothes washing machines. Product was first test marketed in spring of 1960. This month P&G opens major sales effort in New England.

**S**PURRED on by favorable consumer acceptance of "convenience" packages of food products, soap and detergent marketers have quietly been developing washing products in new and unusual forms and in novel (for the soap industry, at least) packages. One of the most intriguing of these, of course, are detergents in tablet or cake form for use in clothes washing machines. Measured dosage packets of both powder and liquid form detergents are also undergoing intensive development and testing. Some of these products are already on the market in limited areas in an effort to ascertain if these are the answer to the housewife's dream of a washing product that reduces "waste."

A major push on behalf of the tablet or cake form detergent is under way in the New England area by Procter & Gamble. P&G's "Salvo," a cake form detergent test marketed early in 1960, is now being sampled in the Boston area. This month P&G will put behind this product, which has had sur-

## Detergent Tablets . . .

**Novel tablet forms and packaging being adopted for many U. S. detergent products to capitalize on housewives' growing demands for "convenience" packages.**

prisingly good consumer acceptance in test markets, all of its advertising and promotional skills. Major advertising space in newspapers and spot radio and TV commercials, in addition to wide-scale sampling, of which P&G is the acknowledged master, are planned for September. "Salvo" was originally test marketed in the San Diego area.

Also on the marketing "band wagon" is Lever Brothers, with "Vim," a low sudsing, blue, tablet form detergent for use in clothes washing machines. "Vim" is out of test markets, originally Seattle, San Diego and Fort Wayne, Ind., and is now being sold in the

state of Oklahoma, in Seattle, Wash., Providence, R. I., and Birmingham, Ala. Based on early successes, Lever is about to push "Vim" into major marketing areas throughout the U. S. later this month.

A similar, but what Colgate-Palmolive Co. feels is a "much superior" solid form detergent, is being test marketed by Colgate in Denver and Oklahoma City. Colgate's entry, "Quik-Solv," a blue detergent tablet, about 2½ inches in diameter, is being marketed in three package sizes, holding 12, 24 and 72 tablets. The package of 12 tablets retails for about 43 cents. This package contains two poly-

"Vim," Lever Brothers blue detergent tablet, comes in three size packages shown below. "Vim" was first marketed in September, 1960, in Seattle, Fort Wayne, Ind., and San Diego, Calif., with newspaper, TV advertising.





Pre-measured, water soluble packets of powder form detergent have been undergoing test marketing in another novel form of packaging. P&G's "Tide" went into test markets in

Jacksonville, Fla., Baltimore, San Diego, and Harrisburg, Pa., just a year ago. More recently, "Dash," another P&G big seller was introduced in "Redi-Pak" form in St. Louis and Denver.

ethylene "sleeves," each holding six tablets. Tablets are scored so that they may be broken in half.

Rumors that Lestoil Products of Holyoke, Mass., was test marketing a detergent tablet were denied by a company spokesman. However, Lestoil would not say it has such a product under development. Lestoil does have "Lestare" bleach in water-soluble plastic packets, which may account for the confusion.

Two other big-name detergents, "Tide" and "Dash" are both available in plastic packets, which are dropped into the washing machine and dissolve. A similar form of packaging is also being tested by Lever Brothers for its "Hum" and "All" liquid detergents.

In checking with various detergent marketers, the convenience factor of the new tablet and pre-measured dosage packets was mentioned several times. This trend in such grocery products as cake-mixes, frozen foods, etc., which began shortly after World War II, apparently is a growing one among soap and detergent

products. According to detergent marketers, both the tablet and the packets take the guesswork out of how much detergent to use for the family wash. This idea, long advocated by housewives, appears to be one of the reasons for the popularity of the newer forms of detergent products and packaging.

As for liquids, it was thought that by this year makers of washing machines would have developed automatic dispensing units for their machines. The makers of this equipment have long favored the use of liquid products for their automatic dispensing units. However, for some reason, automatic detergent dispensers have been held up.

Although most detergent marketers would give their eye teeth for figures on the tablet-pouch sales, and some may know the answers and just aren't talking for publication, it is too early as yet for meaningful figures to be available. This is particularly true since none of the tablet products are being marketed nationally as yet. But the mere fact of the speed

with which the tablets moved out of test markets into other major marketing areas is significant.

There is one other development in the soap marketing derby that is attracting considerable attention. This is the new combination bleach-detergent product, "Answer" being marketed by Tidy House Products of Shenandoah, Ia. The novel feature of this product is the combining of detergent and bleach. This is another one of those products that housewives frequently ask for. Tidy House packages "Answer" in plastic pouches, which in turn, are packaged in a cardboard container. Although both bleach and detergent are in the same water soluble packet, they are in separate compartments.

The new trends in detergent form and packaging, plus the tendency of detergent marketers to diversify into the chemical specialties products field, are giving competitive "soapers" fits. An illustration of this trend to diversification into chemical specialties is P&G's product "Downy." This plastic bottled fabric softener has met

with unexpectedly good results, trade sources whisper. In fact, one knowledgeable P&G competitor believes the success of "Downy" has even surprised P&G marketing executives. ■

### OTS Bibliography

The Office of Technical Services, Business and Defense Services Administration, U. S. De-

partment of Commerce, Washington 25, D. C., recently announced the publication of a new selective bibliography listing government research reports, translations and other technical documents on soap, detergents, and other cleaning agents. Copies of the bibliography, SB-468 Soaps, Detergents, Cleaning Agents (Supplement to CTR-333), are available at 10 cents.

### Armour Names Timander

C. Carl Timander has been named area manager for Central and South America by the grocery products division of Armour and Co., Chicago.

He is responsible for sales of "Dial Soap" and "Liquid Chiffon." He will be headquartered in Panama City, Panama.

### SUMMARY OF COMPETITIVE NEW PRODUCTS

PRODUCT	MANUFACTURER	INTRODUCTORY DATE	MARKETS	ADVERTISING	MERCHANDISING & DEALS
<b>ALL PURPOSE CLEANERS</b>					
REWARD	Lever	Oct., 1960	Cleveland Des Moines Rochester	TV & Newspaper	7¢ & 13¢ off
NIFTY	Lever	Oct., 1960	Madison Wichita		4¢ & 8¢ off
<b>LAUNDRY LIQUIDS</b>					
Gain	P & G	Mar., 1960	Scranton Toledo Albany	TV	¢ off
DYNAMO	Colgate	Mar., 1961	Scranton Portland, Me.	Newspaper, Radio & TV	7¢ & 14¢ off
NEWS HUM	Purex Lever	Oct., 1960 May, 1960	San Diego Des Moines	Newspaper	¢ off
<b>LAUNDRY TABLETS</b>					
VIM	Lever	Sept., 1960	Seattle Ft. Wayne San Diego	Newspaper, TV	¢ off ¢ off
SALVO	P & G	Mar., 1960	Cleveland San Diego Ft. Wayne Cincinnati	TV Newspaper	
QUIK-SOLV	Colgate	July, 1961	Oklahoma Denver	TV & Newspaper	Sampling
<b>WATER SOLUBLE PACKETS</b>					
TIDE packets	P & G	Sept., 1960	Jacksonville Baltimore San Diego Harrisburg	Radio & TV	¢ off
HUM packets	Lever	June, 1961	Harrisburg Jacksonville		
ANSWER HANDY PACK ALL	Tidy House Lever	June, 1961 June, 1961	Lincoln Toledo Ft. Wayne Oklahoma	TV & Newspaper TV & Newspaper	50¢/cs.
SWERL	Colgate	Dec., 1960	Charlotte, N. C. Oklahoma City		
DASH REDI-PAKS	P & G	July, 1961	St. Louis Denver	TV	
<b>DISHWASHING MACHINE DETERGENT</b>					
VEL-O-MATIC	Colgate	June, 1961	New Haven Portland, Me.	Radio, TV & Newspaper	\$1.00/cs.
<b>FABRIC SOFTENERS</b>					
DOWNY	P & G	Sept., 1960	Chicago Indianapolis Portland, Me. Amarillo Minneapolis	Radio & TV Newspaper	5¢ & 10¢ off 7¢ & 14¢ (Minneapolis)

# Local Advertising of Soaps

By Max Brown,\*

Executive Vice-President  
Fels & Co.,  
Philadelphia

**T**HE choice between national and local advertising media is not necessarily a matter of budget. Fels' advertising budget, in fact, is sufficiently large to permit the use of a respectable full-color campaign in a number of national magazines, if such a campaign were advisable. It is sufficiently large to purchase a few daytime network television programs, to participate in nighttime television programs, or to sponsor a series of network specials. The fact is, however, that today, Fels is primarily a local advertiser.

In actual practice we do use a limited amount of national magazine advertising and network radio. We are, even today, one of the largest advertisers of household laundry and cleaning products in *McCall's* and *Ladies' Home Journal*. The point, therefore, is that the budget, in itself, does not determine the choice between national media and local advertising. The choice is dictated by considerations of marketing strategy . . . and marketing strategy in the highly competitive soap business leads us to many things. Quite frankly, we do them the hard way and perhaps this is a throwback to the philosophy of Mr. Samuel Fels who believed that doing things the hard way inevitably built stronger character. You see before you, therefore, a nervous, harassed, worried and rapidly aging individual busily engaged in building character . . . and in an

industry where you have to run like mad just to stand still, the opportunities for building character are enormous. Yet, as a company of moderate size and financial resources, Fels has managed to catch up with new developments and to grow appreciably during the past seven to eight years.

We have introduced new and more modern products, have opened new markets throughout the United States and Canada, and we have done it in the face of the most extreme kind of competitive environment. Our newest product, an all-purpose cleaner, which was introduced about two years ago, currently has about a 30-to-1 unfavorable balance of advertising. In other words, for each hundred dollars we spend in advertising this product, our major competitors spend about three thousand dollars. Those of you who say to your advertising agencies, "Our dollars must work twice as hard," are too easy on the boys. We tell our agency, "Our dollars must work thirty times as hard," and you should see how rapidly they are aging.

Furthermore, if you think a 30-to-1 ratio is bad, the situation is even worse for our other advertised brands! Our advertising and marketing strategy must cope with this basic situation. It is this kind of competitive atmosphere which has dictated our choice of local advertising.

We believe the running battle between the advocates of national advertising (mainly net-

work TV executives and magazine publishers) and the advocates of local advertising to be somewhat academic. Either course has significant advantages, and I can say this with some authority . . . as a representative of a company that placed full-page advertisements in *Good Housekeeping* magazine for thirty consecutive years without missing a single issue. A realistic appraisal of your financial resources, marketing requirements and competitive situations may indicate to some of you, however, as it has to us, that local advertising has certain important advantages.

## Pros of Local Ads

First—flexibility. Local advertising permits us to exercise maximum flexibility in both our budget and copy scheduling. At almost a moment's notice, we can increase or decrease our budget—nationally, regionally or in individual markets. We can rapidly change our media plans to meet changing marketing conditions. We can switch from radio to television to newspaper, or we can employ a media mix involving two or even three different local media to meet changes in marketing or product advertising requirements. Flexibility has enabled us to build our business back—on a market-by-market basis.

A second major advantage is the ability to integrate closely local advertising with local promotional and selling plans. We can run special promotions in individual markets and provide

\*Talk delivered at midyear meeting of Grocery Manufacturers of America, Inc., White Sulphur Springs, W. Va., June 1961.

strong local advertising support for those plans. We can introduce new products on a market-by-market basis in a very expedient manner, and with a minimum of additional advertising expense. And to those of you who have had to introduce new products on a shoe string, I might say that we have had to introduce new products barefoot.

A third advantage is a marked degree of trade preference for local advertising. Our own sales and broker organizations also voice much greater enthusiasm for advertising in local media since these are well known to them through their day-to-day contact. This, of course, permits us to do a much more impressive and meaningful job of merchandising our advertising to both our sales organization and the trade.

Fourth — The impact of local advertising on consumers is much greater than many of you may suspect. Our sales have grown substantially under this impact! We have successfully introduced new products, in the face of overwhelming competition, through our use of local advertising. Our own research studies show a high level of brand awareness and brand conversions . . . through the impact of local advertising.

Fifth—economy. This point, like all matters dealing with costs, is subject to great dispute. However, by fairly adroit planning, we believe we can generally achieve coverage at a lower cost per thousand on a local basis. For example: We believe that our radio advertising costs should average no more than about \$1.50 to \$2.00 per thousand families. These costs, of course, are conditioned by certain media standards which we have set with respect to coverage, impact,

scheduling, programing and other criteria.

#### **Local Campaign Planning**

Now, let's consider the fundamentals involved in the development of local advertising campaigns. We believe that the first fundamental is that of strong, detailed and continued *planning*. This cannot be emphasized too strongly. Since we advertise in about 150 markets, we have, in effect, 150 separate advertising campaigns running for each of three different products throughout the United States and Canada. The over-all campaign is planned individually for each marketing area.

To this end, we expect our agency to know the most intimate details of each market—not just media costs from *Standard Rate and Data*, but a thorough knowledge of each market, the food retailers, relative media costs, and the type of programming conducted by each radio and TV station. We even expect them to know the type of music played by each disc jockey, on each station, in each market, because we firmly believe that the atmosphere of the program is an important consideration in the placement of advertising. We insist that audience composition is all-important, that the printing performance of each newspaper must be known, that media overcommercialization must be watched. We have advertising, merchandising and marketing people from our company constantly in the field . . . and our agency has the same.

This knowledge of local markets and media, coupled with our own experience, enables us to develop firm and efficient plans for each market. We are opposed to the use of a standard media

pattern for all markets. We believe that media opportunities exist in each market . . . and that our campaigns must be designed to take advantage of these opportunities. We prepare plans for each marketing area, every six months. These plans are quite comprehensive and are reviewed in relation to sales progress in each market. To those of you who conduct or may be thinking of conducting local advertising campaigns, I cannot emphasize too strongly the need for this type of market and media knowledge and planning.

The second fundamental is budget allocation. There must be as many theories about budget allocation as there are about advertising copy . . . and we will not become involved in either of these arguments. Basically, however, we believe that budgets must be allocated to markets in relation to the number of dollars needed *per thousand families* to create the desired impact in the market. Over a period of years, we have arrived at the conclusion that a given number of dollars per thousand families will generally produce a given result, depending on our position in the area. The precise figure varies moderately from market to market, depending upon relative media costs and competitive pressures.

I am not suggesting any "best" figure for you. My point here is that you must determine, largely through experience and trial and error, the most effective expenditures per thousand families required to produce varying sales results. You *cannot* do it on a cost-per-case basis for this has no relation to advertising requirements. Cost per case must be the ultimate consideration in determining profitability, but it must *not* be the fundamental influence in determining individual market budgets.

The third consideration is media selection. As I commented above . . . we do not believe in establishing a standard media pattern for all markets. Some markets

### **Flexibility, consumer impact, economy, trade preference are advantages which make local advertising effective for the marketer operating on a limited budget.**

produce the best results for us through the use of spot radio or TV advertising. Other markets have been more responsive to newspaper advertising. The question then is: "How do we know which one to use in each market?" Well, experience has taught us a great deal about the relative effectiveness of individual media in individual markets. Then too, we are not reluctant to move around. Although we think we should stay with given media for a minimum of thirteen weeks . . . and quite often we have stayed with the same media and even the same programs for many years . . . we also do a lot of testing. We test the use of different media . . . and different types of commercials and different time segments, that is, minutes, 20s, IDs, etc. We test the use of different types of media mix . . . newspapers and radio, television and radio, etc. For those who are engaged in local advertising, I strongly recommend that they constantly test different ways of using local media, and thus arrive at their own conclusions regarding their effectiveness. There is *no* formula for media selection.

### **Scheduling**

The fourth fundamental is scheduling. How do we know how to schedule our advertising? Well, individual budget and product requirements often dictate this. We have also concluded that some products require a greater degree of visual advertising than others . . . and this, too, helps form a basis for copy scheduling. We are very strong believers in fundamentals. We think consistency is the most important requirement of successful advertising. Therefore, we arrange our planning, budget and media selection in a way that permits us to support each brand in each market with a minimum of forty weeks of advertising during the year.

Finally:—How do we check our own performance? How do we evaluate the success or failure of

each of our local campaigns? This is the \$64,000 question. An analysis of sales does not, in itself, provide a completely satisfactory evaluation. Sales results are clouded by scores of influences . . . deals, competitive activity, the efficiency of our sales organization and brokers, trade relations and many, many other factors. Nevertheless, we have the philosophy that we advertise to increase sales and that our advertising, over the long range, *must* increase our sales. When sales fall off in a market . . . even temporarily . . . we complain bitterly to our advertising agency and sales department, and we expect them to provide us with a review and recommendations.

Our field sales organization also helps to evaluate our performance and, when we begin to get complaints from the field, we are alerted to the fact that something must be amiss in our marketing strategy. We do other things as well. We conduct surveys on brand awareness and brand conversions in individual markets through our own market research department and that of the agency. We maintain an elaborate monthly sales analysis, by product and by market, which takes into consideration all of the major marketing factors and expenditures for each market. However, we do not believe that there is a precise formula that

**Max Brown, author of the article on local advertising, was vice-president in charge of sales for Fels, prior to his election earlier this year as executive vice-president.**



would enable us to evaluate our performance without the application of a very considerable degree of personal judgment.

### **How to Develop Campaign**

This, then, should give a rough idea . . . and I'll admit it is very rough . . . of what we believe to be the most effective way of developing local advertising campaigns . . .

- First -Thorough and detailed planning based upon market and media knowledge.
- Second -Development of individual market budgets based upon cost per thousand families.
- Third -Careful media selection based upon media opportunities that exist in individual markets.
- Fourth -Careful copy scheduling that provides continuity and meets the copy requirements for individual products.
- Fifth -Constant checking of our performance in each market on a month-to-month basis.

To do all of these things properly, one must, of course, have an advertising agency that is completely oriented to the difficult proposition of market-by-market advertising. It must have . . . or must develop . . . applicable skills, understanding and a deep, thorough knowledge of individual markets. This is not an ivory tower operation . . . it is a real, honest-to-goodness grass roots job.

There are two other topics that I would like to touch upon very briefly . . . new market introductions and new product introductions.

### **Opening New Markets**

During the past five years, we have opened a great many new markets and this, of course, requires considerable planning and also a fair amount of good luck. Before opening a new market, we

*(Turn to Page 108)*

# Forces in Detergency

By J. C. Harris\*,

Monsanto Chemicals Co.

Dayton, O.

Part V

**D**ATA in Table IX show that the work of cohesion of an organic compound is generally comparatively low, while the work of adhesion of the same liquid or liquids for water, with the possible exception of the paraffins, generally is appreciably higher. This suggests that if the  $W_c$  and  $W_a$  for these liquids with solid surfaces were of the same order, that multilayers of the organic material would be relatively easily removed as compared with those adhesively bound to another surface. Increasing polarity of the compound increases  $W_a$  for a polar surface such as water.

Energy of adhesion of a liquid to a solid is

$e_{A(SL)} = e_L - e_i = e_L - H_i$  (16) where  $e$  represents the energy for adhesion of liquid to solid,  $L$  is liquid,  $e_i$  is internal energy change on immersion,  $S$  is the solid, and  $H_i$  is heat of immersion (97).

The work of adhesion (Dupré equation) as Harkins (44) pointed out, is not

$W_A = \gamma_S - \gamma_{SL} + \gamma_L$  (17) unless the angle of contact  $\theta$  of the liquid with the solid is zero. When  $\theta$  is not zero, but the system is in equilibrium with the saturated vapor of the liquid, the correct equation is

$$W_A = \gamma_L (1 + \cos \theta) \quad (18)$$

For a liquid/liquid system

$W_A = \gamma_{L1} + \gamma_{L2} - \gamma_{L1L2}$  (19) or for a liquid/liquid/solid system (10)

$$W_A = \gamma_{L1L2} (1 + \cos \theta) \quad (20)$$

The fraction of the solid surface covered by a liquid ( $\sigma$ ) may be obtained (30) from the known equilibrium  $\cos \theta_E$ , and

Table IX. Water and Various Liquids  
(43)

Comparison of work of cohesion ( $W_c$ ) with work of adhesion ( $W_a$ ) to water — 20°C.

Type of Compound	W <sub>c</sub>	W <sub>a</sub>
Paraffins	37-45	36-48
Alcohols	45-50	92-97
Ethyl mercaptan	43.6	68.5
Methyl ketones	ca. 50	85-90
Acids	51-57	90-100
Nitriles	ca. 55	ca. 90

$$\cos \theta_E = 2\sigma - 1 \quad (21)$$

A further value of importance to the detergent function is the relative energy of the work of adhesion of a liquid for a solid and its work of cohesion

$$W_A - W_c \quad (22)$$

This is Harkins'  $S$ , or spreading coefficient. Spreading occurs when the adhesion is greater than the cohesion of the liquid in position to spread. Conversely, spreading does not occur when cohesion is greater than adhesion. Frequently, the  $W_c$  is less than  $W_a$ , and the relationship will indicate apparent ease of separation. In the case of

polyfluoro surfaces, negative values are obtained, and spreading on the surface does not occur; organic substances on such surfaces should be easier to remove than it would be to separate droplets of the organic liquid from itself.

Osterhof and Bartell (71) proposed three types of wetting:  $Adhesional W_A = \gamma_S - \gamma_{SL} + \gamma_L$ ,  $Spreading W_S = \gamma_S - \gamma_{SL} - \gamma_L$  (23),  $Immersion$

$W_i = \gamma_S - \gamma_{SL} = \gamma_L \cos \theta = A_{SL}$  where  $\gamma_S$ ,  $\gamma_L$ , and  $\gamma_{SL}$  are surface or interfacial tensions of solid, liquid, or solid/liquid,  $A$  is adhesion tension, and  $\cos \theta$  is that of the angle between solid/liquid. Table X shows some of their data for hexane and water with several solids. The data for paraffin show that the energy for adhesional wetting is decreased, the value being 54.03, but that work must be done for either immersional or spreading wetting, particularly the latter, the value being  $-90.13$  ergs/cm<sup>2</sup>.

Wetting of an oil film for ease of detachment was represented (46) by the following equation:

$$\cos \theta = \frac{IFT \text{ solution/film} - IFT \text{ oil/film}}{IFT \text{ oil/solution}} \quad (24)$$

Table X. Types of Wetting for Various Surfaces (71)  
25°C.

Solid	Liquid	$\gamma_S$	$\gamma_L$	$\gamma_{LS}$	Types of Wetting (ergs/cm <sup>2</sup> )		
					Adhesional	Immersional	Spreading
Carbon	Hexane	17.82		87.75	69.93	52.11	
	Water	72.08		126.82	54.74	-17.34	
Silica	Hexane	17.82		59.95	42.13	24.31	
	Water	72.08		154.90	82.82	10.74	
Glass	Water	150	72.08	67	154.90	82.82	10.74
Paraffin	Water	40	72.08	58	54.03	-18.05	-90.13
Mercury	Hexane	475	17.82	378	114.82	97	79.18
	Water	475	72.08	375	172.08	100	27.92

where the three interfaces are indicated, and the cosine of the angle of contact may be determined. When the angle of contact  $\theta$  is nearly zero, an oil will no longer tend to adhere to a surface, and  $\cos \theta$  is 1. This relationship was reduced to the equation (2):

$$\cos \theta_{AB} = \frac{W_{AS} - \gamma_A - (W_{BS} - \gamma_B)}{\gamma_{AB}} \quad (25)$$

where  $\gamma_A$  and  $\gamma_B$  are the surface tensions of oil and aqueous solution,  $\gamma_{AB}$  their interfacial tension, and  $W_{AS}$  and  $W_{BS}$  are the works of adhesion for oil/solid and aqueous solution/solid, before displacement occurs (the  $W_{AS} - \gamma_A$  and  $W_{BS} - \gamma_B$  values are generally known as adhesion tensions).

Kling and Koppe (57) utilized these expressions in attempts to estimate the energies involved in laundering. Their value  $\Delta j$  is the difference between the adhesion tensions of the two systems:

$$\Delta j = W_{AS} - \gamma_A - (W_{BS} - \gamma_B) \quad (26)$$

If  $\Delta j$  is greater than the interfacial tension of the solution/oil interface  $\gamma_{AB}$ , the droplets of oil were spontaneously detached. In most cases, however,  $\Delta j$  was smaller than  $\gamma_{AB}$ , and though oil droplets formed, they did not spontaneously detach, and had definite angles of contact with the solid surface. The work done by the system was represented by

$$-A_w = F(\Delta j - \gamma_{AB}) \quad (27)$$

where  $F$  was the area freed of oil. (Here the German  $A$  signifies work, the  $W$  washing, or  $-A_w$  is conventionally  $-W_R$ .) The  $A_w$  or  $W_R$  term was defined as the residual work of washing (59).

The residual work of laundering  $W_R$  was derived (58) as follows:

$$W_R = y \cdot \gamma_{AB} \quad (28)$$

where  $y$  is a function of the contact angle, expressed as

$$y = \sqrt[3]{4 - \sqrt[3]{2 - 3X_0 + X_0^3}} \quad (29)$$

where  $X_0$  is  $-\Delta j / \gamma_{AB}$ . The term  $W_R$  as calculated by the foregoing equations (28) and (29) is related to an oil drop of the volume

$$V = 1/3 \sqrt{\pi} cm^3 \quad (30)$$

where  $F$  is large with respect to oil droplet size,  $V$  can be neglected.

Examples were given illustrating the use of these equations to express detergent effectiveness in removal of oily soil. (58, 59). One example was that of removal

between the solid and the water or aqueous detergent solution, and  $D_{WOS}$  represents the displacement of oil from the solid. In the present work (80) the displacement was from textile fibers, in a sinking time test where an oil-soaked cotton swatch was placed at the oil/detergent solution interface, and the time for the swatch to sink into the detergent solution was measured. It was found that polyvalent anions, e.g., polyphosphate, ferrocyanide, and carboxymethylcellulose increased the oil displacement, possibly by sorption of the anion, followed by hydration through the attraction of electro-positive water solution. Addition of surfactant reduced the speed of displacement by reducing  $\gamma_{OW}$  and thus  $D_{WOS}$  and hindered displacement by reducing capillary penetration.

The decrease in free energy  $\Delta F$  when a liquid spreads on a solid was numerically equal to the sum of the products of interfacial tension  $\gamma_1$  and the area of the surface,  $A_1$ , that disappears when the

For a drop of water "w" on a solid "s" surface, both under oil

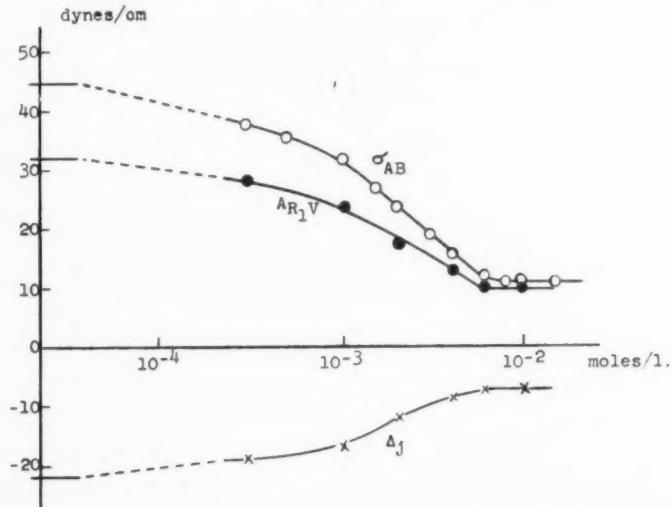
$$\gamma_{BS} = \gamma_{AB} \cdot \cos \theta_{AB} \quad (26)$$

"o",

$$\gamma_{OW} \cos \theta = \gamma_{SO} - \gamma_{SW} = D_{WOS} \quad (31)$$

where  $\gamma$  is the surface or interfacial tension,  $\cos \theta$  the contact angle be-

Figure 4.



Interfacial tension  $\sigma_{AB}$ , difference of the adhesion tensions  $\Delta j$ , and residual work of washing  $A_R$  for the system poly- $\epsilon$ -caprolactam foil, liquid paraffin, aqueous sodium dodecyl sulfate solution, as a function of the concentration of the detergent.

terfacial of the newly formed surface  $\gamma_2$  (70)

$$\Delta F = \Sigma \gamma_1 A_1 - \Sigma \gamma_2 A_2 \quad (32)$$

Guastalla (40) by a tandem arrangement of torsion balances was able simultaneously to measure  $\gamma$  and  $\tau$ , the work of dewetting/cm<sup>2</sup>, through the immersion of two slides in the liquid under study, one readily wetted for  $\gamma$  and the other being coated with paraffin, for example. He pointed out that the equation

$$W_A = \tau + \gamma = \gamma \cos \theta + \gamma = \gamma(1 + \cos \theta) \quad (33)$$

is, as others have shown, not precisely correct for a wetted surface. Attempts to use  $\gamma$  and  $\tau$  as measures of true values of free adhesional energy should not be attempted. The measurement of  $\tau$ , as the energy of dewetting/cm<sup>2</sup> of an unwetted surface may be considered correct, and considerable knowledge can be derived from these values. However, for an essentially unwetted surface such as a paraffin coated slide,  $W_A$  is substantially equal to true adhesional energy. Guastalla and Guastalla (41) measured adhesion tension directly and their values for paraffin and water averaged -27 dynes/cm, mica and water +55 dynes/cm, a monolayer of oleic acid on paraffin with water +12 dynes/cm.

Adhesion tension values for carbon black and silica were developed for several solvents (8):

Adhesion Tension (dynes/cm)		
Liquid	Carbon Black	Silica
Water	54.74	82.82
Toluene	82.13	54.70
Hexane	69.93	42.13

One solvent may displace another from a solid if the displacement occurs at a lower energy level, and toluene would displace water from carbon black:  $A_T$  for toluene 82.13,  $A_W$  for water 54.74;  $A_W - A_T = -27.39$  dynes/cm lower energy level, and displacement occurs.

Lange (64) developed valuable data for a homologous series of sodium alkyl sulfates, determining their adhesion tensions for paraffin-covered glass slides. Using

Guastalla's technic (39), he measured the adhesion tension for the receding liquid in dynes/cm. The  $j_r$  value, called work of dewetting (per cm<sup>2</sup>), was developed at constant ionic concentration with added NaCl or MgCl<sub>2</sub>. It was found that maximum adhesion tension values were attained with the C<sub>12</sub> to C<sub>14</sub> alkyl sulfates (about 22 ergs/cm<sup>2</sup>).

Concurrently with these determinations, the stabilizing effect

$$W_A = \tau + \gamma = \gamma(1 + \cos \theta) \quad (33)$$

of the surfactants on a paraffin sol was determined by adding increasing quantities of the surfactant to sols which would be completely coagulated in the absence of surfactant (relying upon turbidity measurements to indicate maximum coagulation). As with adhesion tension values, optimum protection against coagulation was afforded by the C<sub>12</sub> to C<sub>14</sub> products. Since electrical repulsion between the paraffin sol particles is essentially suppressed by the high electrolyte concentration, stabilization of the hydrophobic sols by surfactant or protective colloid may be attributed to adsorption and hydration of the sol particles. Surface inactive sol stabilizers had no effect upon adhesion tension (but at sufficient concentration carboxymethyl cellulose did), suggesting that work of desorption is small for these materials, but that stabilization because of molecular size is based upon low speed of desorption.

Another precise approach to interfacial characteristics of liquid/liquid interfaces involved the ratio of the free energy of adhesion for the interface between liquid phases, and the geometric mean of the free energies of cohesion of the separate phases (33).

$\Delta F_{ab} = \gamma_{ab} - \gamma_a - \gamma_b \quad (34)$   
the free energy of adhesion for the interface between phases a and b, per cm<sup>2</sup>, and

$$\Delta F_c^n = 2\gamma_n \quad (35)$$

the free energy of cohesion for phase n, so that

$$-\frac{\Delta F_{ab}}{(\Delta F_c^n \Delta F_c^b)^{1/2}} = \phi \quad (36)$$

The energy ratio is also the same as the free energy ratio for the constant  $\phi$ .

The practical application of the function  $\phi$  was shown by Mankowich (67) as applied to a series of surfactant solutions at practical detergent concentrations with a series of organic liquids. From surface and interfacial tension measurements it was concluded that estimations of interfacial tension and free energies of adhesion of the surfactant/organic liquid systems could be made with an accuracy of about 1 erg/cm<sup>2</sup>. A nomograph was constructed for work of adhesion from measurements of surface tensions, based upon the several  $\phi$  values for glyceryl trioleate, octyl alcohol and octanoic acid, isoctane and n-heptane, and paraffin oil and castor oil systems, using seven different nonionic surfactants of different types, two anionics, and one amphoteric surfactant. Values of  $\phi$  were: for glyceryl trioleate 0.991; isoctane and n-heptane 0.963; paraffin and castor oil and the octyl compounds showed somewhat greater variation but mean values were used. Knowing the surface tensions of both the aqueous and organic phases and a calculated  $\phi$ , it is possible to arrive at both the interfacial tension and the free energy of adhesion, the latter agreeing somewhat better with experimental values.

The theory mentioned above, proposed for the estimation of interfacial energies (33) was extended to cover the calculation of the surface energy of solids from heats of immersion (38). Values obtained for "Teflon" (du Pont) were: Total surface energy 56 to 69 ergs/cm<sup>2</sup>, and a surface entropy of 0.17 erg/cm<sup>2</sup>/degree; for graphite the total surface energy was estimated as 119 erg/cm<sup>2</sup>, surface free energy of 70 ergs/cm<sup>2</sup>, and surface entropy of 0.16 erg/cm<sup>2</sup>/degree.

Measurement of surface and interfacial tensions and of contact

angles has given much of the currently available information concerning energy conditions in the detergent system. Particularly useful for solid substrates is measurement of contact angle, since surface tensions and interfacial tensions with solids are either very difficult or virtually impossible to measure. From these values, works of adhesion, cohesion, spreading and immersion can be calculated.

Adhesion energies, the changes in internal energy upon separation of a liquid from a solid at an interface of unit area, have been used in the calculation of the residual work of laundering. This residual work represents the mechanical energy which must be used to disengage oil droplets from the substrate, once the other forces have reached an equilibrium. Examples of these values have been obtained, but the work has not as yet been widely applied.

Adhesion tension values have also been used as a means for predicting displacement of a liquid from a solid, the displacement occurring when a lower energy level is attained.

The ratio of the free energy of adhesion for the interface between liquid phases and the geometric mean of the free energies of cohesion of the separate phases gave a constant which could be used to estimate the free energies of adhesion of other systems. These measurements and values were extended to the estimation of the surface energy of solids from heats of immersion. ■

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#### Key-Fries Catalog

A 12 page catalog of organic intermediates was issued in August by Kay-Fries Chemicals, Inc., 180 Madison Ave., New York 16. The 1961-62 list includes, in addition to a number of well established items, a large proportion of new materials available only in pilot plant or research quantities.



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SUBJECT:	2-Nitropropane	DESCRIPTION:	Solvent for vinyl and epoxy coatings	ACTION DESIRED:	Consider 2-NP to achieve higher quality at lower cost
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### General

2-NP ( $\text{CH}_3\text{CHNO}_2\text{CH}_3$ ) is a member of the extraordinarily versatile CSC Nitroparaffin family. Its most outstanding characteristic is its unique solvent property which permits the use of larger proportions of low cost alcohols and aromatics in solubilizing a wide variety of coating materials, dyes, organic chemicals, fats, and oils. This unique property is of special interest in the formulation of vinyl and epoxy coatings.

### Solvent for Vinyls

With the introduction of 2-NP—for the first time—formulators of vinyl chloride-acetate copolymers were able to obtain coatings with 1) lower viscosity and/or higher solids, 2) medium evaporation rate with better flow, 3) improved solvent release resulting in reduced drying time, and 4) mild odor. In addition to these advantages, the ability of nitrated solvents to displace water results in coatings with better adhesion to hydrophilic surfaces and better weathering properties due to improved dispersion. 2-NP's high flash point and low volatility provide added safety factors.

Research and field experience in the packaging industry have shown that the high solids content of 2-NP-formulated vinyls offers important advantages in the high-speed coating of food and beverage containers. 2-NP also proves useful in vinyl ink applications since it does not attack gelatin or most rubber rolls but still provides outstanding adhesion or "bite" to many plastics.

### Low Viscosity and/or High Solids Content

2-NP can be formulated to give vinyl solutions of higher solids content and/or lower viscosity than any other medium evaporating solvent. In addition, 2-NP solutions have good stability and show no tendency to gel.

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Solvent mixtures based on 2-NP have been found to be superior to other solvent systems for epoxy coatings cured at room temperature. Improvements brought about by the use of 2-NP include much greater chemical resistance, marked reduction in pinholing and water vapor permeability, minimized crawling and cratering, and improved adhesion.

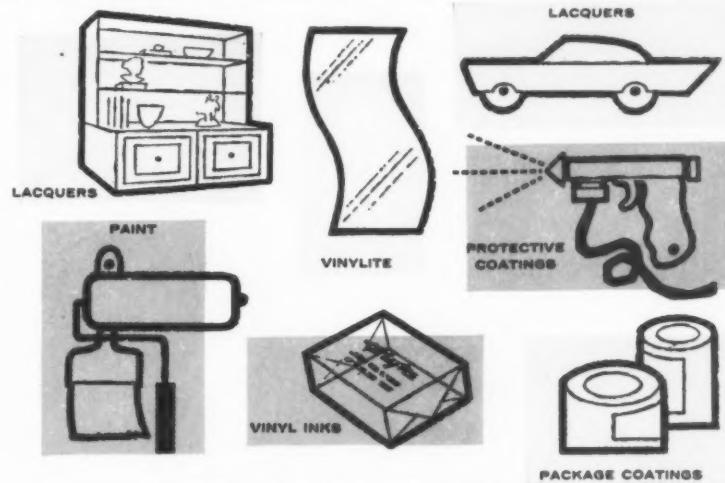
2-NP is compatible with amine catalyzed systems (with the exception of ethylene

diamine) and systems employing urea-formaldehyde, polyamides, or phenolic cross linking agents.

The ability of nitrated solvents to wet pigments and hydrophilic surfaces, as previously mentioned in the section entitled *Solvents for Vinyls*, also applies to epoxies as well as other vehicles used by the coating industry.

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2-NITROPROPANE

## DDVP Process Patent Given to Norda, Inc.

United States Patent  
2,968,591 Issued  
January 17, 1961

A process for the control of the cigarette beetle *Lasioderma serricorne* which comprises subjecting the beetle to an atmosphere containing a lethal concentration of DDVP vapors.

*Lasioderma serricorne* has the world-wide aliases cigarette beetle, tobacco cigarette beetle, herbarium beetle, towbug, gorgojo (the dwarf).

"This cosmopolitan species infests tobacco wherever it is stored...a pest of books causing much injury, severely injures furniture upholstered with flax tow or straw, the larvae feed on upholstered furniture, particularly stuffing and may damage silk, (and) cause serious damage to sacks containing cotton-seed meal. These flying beetles invade residences in the vicinity of the meal establishments...and cause no end of annoyance. The foods upon which it feeds are legion, a few are rice, ginger, raisins, pepper, dried fish, drugs, seeds. In the United States there are 3 generations per year, but in certain parts of the world there are five or six . . . (it was present) in the tomb of Tutankhamen (and) is probably native to Egypt, (it has) shown practically no change in 3500 years." Arnold Mallis, *Handbook of Pest Control*, 2nd Edition, Mac-Nair-Dorland Co.

"Distribution: Throughout the United States and Southern Canada"—by permission from *Destructive and Useful Insects*, Metcalf & Flint. McGraw Hill Book Co., Inc.

To request information on U. S. Patent 2,968,591 please write us on your letterhead.

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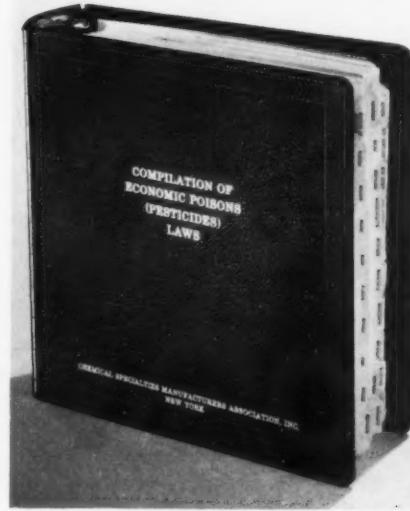
Are waxed floors safe? Yes, says an expert who writes on the technical aspects of the safety of waxed floors in article beginning on page 80. Dr. J. Vernon Steinle, director of research for S. C. Johnson & Son, Inc., gives pointers that may be helpful to defense attorneys in wax slipping cases.



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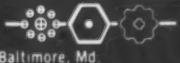
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# Lithium Hypochlorite Bleaches

By R. B. Ellestad,

Lithium Corp. of America,  
Bessemer City, N. C.

**D**RY laundry bleaches are gaining in popularity. Convenience in handling and economy in weight and volume are among their main virtues. A dry bleach with these advantages plus the bleaching power of sodium hypochlorite, and which does not introduce problems of solubility or calcium precipitation, would certainly answer a real need.

For some time, investigators have been aware that lithium hypochlorite could be just such a product if certain problems of stability and processing could be overcome. Indications are that these difficulties have now been solved and that lithium hypochlorite is ready to enter the race.

## Lithium Hypochlorite Data

Active ingredient	LiOCl	
Available chlorine (approximate)	35%	
<b>Approximate composition</b>		
LiOCl	30%	
NaCl	34	
Na <sub>2</sub> SO <sub>4</sub>	20	
K <sub>2</sub> SO <sub>4</sub>	3	
LiCl	3	
LiClO <sub>4</sub>	2	
LiOH	1	
Li <sub>2</sub> CO <sub>3</sub>	7	
H <sub>2</sub> O		
Color and physical form	White granules	
Screen analysis; approximate only (U. S. Standard Sieves)	+20	10%
	-20, +40	45
	-40, +60	25
	-60, +80	17
	-80, +100	2
	-100	1
Bulk density	65 lbs. per cubic foot	
Solubility in water	Greater than 30 weight per cent at room temperature.	

**Solubility rate** In the preparation of a water solution containing 250 ppm of available chlorine, using water at 75°F and 100°F, with mild agitation, solution is complete in 30 and 15 seconds, respectively.

pH of water solutions	ppm of available chlorine	pH at 25°C
100	9.9	
200	10.3	
400	10.7	

## Bleaching Characteristics

Sodium hypochlorite is generally accepted as the standard bleach. Extensive tests were conducted by an independent research laboratory, in which the bleaching characteristics of lithium hypochlorite were compared with those of sodium hypochlorite and of a typical chlorinated isocyanuric bleach. Results may be briefly summarized as follows:

(a) Lithium hypochlorite is equivalent to sodium hypochlorite for the removal of fabric stains, including those deposited in normal wear, and those accidentally deposited by food spillage. It is superior to the best known solid bleach (containing a chlorinated isocyanuric acid as the active ingredient) for the removal of stains deposited in the normal wear of fabrics.

(b) Lithium hypochlorite has the same effect as sodium hypochlorite on the color of vat-dyed cotton fabrics.

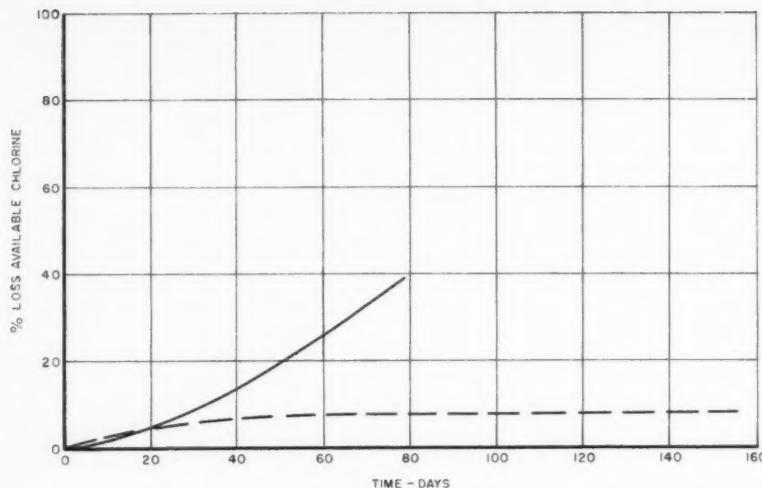
(c) After repeated laundry cycles, including bleaching, lithium hypochlorite caused no greater decrease in fiber strength than sodium hypochlorite.

## Formulation, Compatibility

For home laundry use, a product with from four to eight per cent available chlorine is usually desired. This requires dilution of the 35 per cent material with a suitable filler. Formulation practices employed for the chlorinated organic bleaches do not necessarily apply to lithium hypochlorite. Organic bleach formulations usually include expensive ingredients for pH and odor control, which are not required for lithium hypochlorite. Formulations of the latter for household and commercial laundry use may be prepared by diluting the concentrated product with an inexpensive, inert filler, such as anhydrous sodium sulfate or sodium chloride, by means of a simple dry mixing process.

Production procedure for the preparation of the available dry bleach formulations based on the chlorinated organics involves

**Lithium hypochlorite based dry laundry bleach combines effectiveness of sodium hypochlorite with ease of formulation, convenience in use and absence of bulk**



**Figure I. Stability of LiOCl Bleaches**  
Formulation: LiOCl Nominal Av. Cl<sub>2</sub>—36% Container: composite fiber  
Storage: 90°F./97% R.H.—solid line 70-75°F./35-75% R.H.—dashed line

either spray drying the complete formulation, or spray-drying a base bead, followed by admixing with the bleaching agent. The objective is a finished product of very low bulk density. This results in a bulky consumer package which is thought to appeal to the economy-minded housewife. Furthermore, a bulk density approximating that of a five per cent sodium hypochlorite solution is thought to be desirable, because the housewife, accustomed to the latter, may switch to dry bleach without changing the customary dosage volume.

Lithium hypochlorite formulations, made by blending of the concentrated product with an inert filler, have rather high bulk densities. This property is actually an advantage. Education of the housewife to use a smaller dosage volume (perhaps aided by a suitable measuring cup also used as the package closure) should be no great problem. The more compact package would be welcomed by the retailer, because it conserves valuable shelf space.

The high bulk density of the product, the use of an inexpensive diluent and the elimination of the spray drying operation would result in substantial savings and allow the use of a better container material, such as polyethylene. This would not only pro-

vide superior protection against deterioration due to moisture and carbon dioxide, but also result in a more attractive package.

Lithium hypochlorite is a powerful oxidizing agent. In general, blending with organic materials should be avoided, since this may result in lowered stability and, in some cases, in potentially hazardous mixtures. However, if desired, lithium hypochlorite formulations can be produced containing surfactants of the alkyl aryl sulfonate type in amounts of up to 1 per cent, without loss in stability. It is also possible to incorporate

certain optical brighteners, such as "Calcollor 5BT" (American Cyanamid Co.) without decreasing product stability.

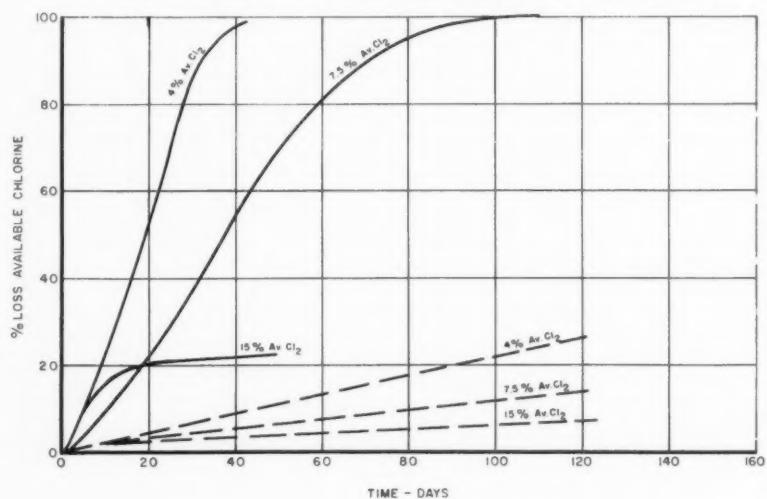
### Stability and Packaging

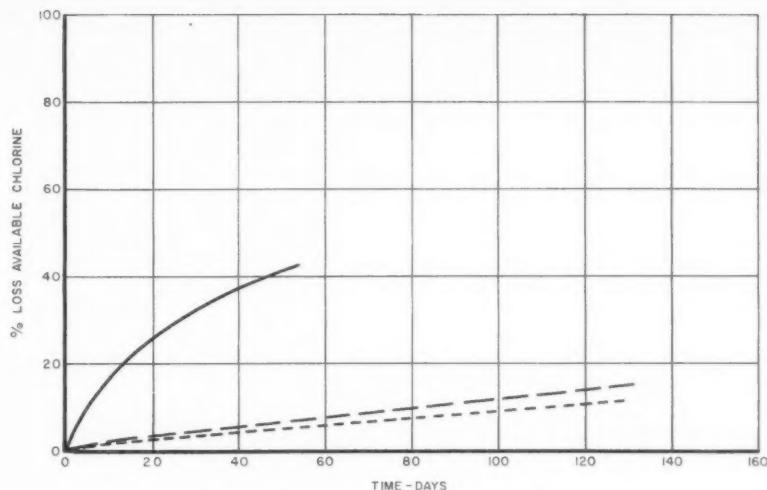
To insure adequate stability, lithium hypochlorite requires good protection from moisture and carbon dioxide. A comprehensive investigation of stability has been made, covering a wide variety of formulations, several types of containers, and varied storage conditions. The more pertinent and significant results are summarized and presented in Figures I through V. In addition, some data are given comparing lithium hypochlorite with several of the chlorinated cyanurics.

All of the lithium hypochlorite formulations tested used anhydrous sodium sulfate as the diluent, with the exception of the formulation covered in Figure V, where sodium tripolyphosphate plus sodium chloride were used. Further tests, not included in the graphs, used either sodium chloride or potassium chloride. It was concluded that sodium chloride is nearly as satisfactory as sodium sulfate, but that potassium chloride is inferior to sodium chloride.

*A. Lithium Hypochlorite, 35 per cent available chlorine: (Figure I and Table I).* These data

**Figure II. Stability of LiOCl Bleaches**  
Formulation: LiOCl + Na<sub>2</sub>SO<sub>4</sub> Preparation: dry mix Storage: 90°F./85% R.H.  
Container: composite fiber—solid lines; polyethylene—dashed lines





**Figure III. Stability of LiOCl Bleaches**  
 Formulation:  $\text{LiOCl} + \text{Na}_2\text{SO}_4$ . Preparation: dry mix. Nominal Av.  $\text{Cl}_2$  - 7.5%  
 Container: polyethylene. Storage: 120°F./35% R.H. — solid line;  
 90°F./85% R.H. — dashed line; 70-75°F./35-75% R.H. — dotted line

demonstrate the stability of the undiluted material, of interest if packaging and distribution of the concentrate is considered, either in small bulk packages, or in single-use packets.

Figure I illustrates stability of the undiluted material packaged in a metal-end fiber can with an aluminum foil outer laminate, (designated "composite fiber" in the figure). The stability under the drastic storage conditions of 90°F. and 97 per cent R. H. (relative humidity) is excellent; under moderate conditions, it is exceptional.

Bulk shipments from Lithium Corp. of America will be made in fiber drums with a polyethylene bag liner. In this case, even better stability should be observed.

Table I lists data obtained for the undiluted material packaged in heat-sealed triple film packets. Excellent stability was found under the drastic storage conditions.

**Table I. Stability of Lithium in Triple-Film Pouch Packets**

Film: Paper (outside)-aluminum-polyethylene (inside)  
 Contents: 15 grams of lithium hypochlorite (35% available chlorine)  
 Storage: 95°F/95% R. H.  
 % Available chlorine

	Initial	36.0	36.0
After 4 weeks	34.9	34.8	

with increasing content of available chlorine. In addition, it is apparent that the polyethylene container affords superior protection, undoubtedly because it provides a better barrier against moisture and carbon dioxide.

Figure III presents further information on the stability of a lithium hypochlorite in polyethylene containers.

**C. Comparison of Lithium Hypochlorite with Chlorinated Cyanurics:** (Figures IV and V.) In Figure IV stability data are given for household bleaches containing 7.5 per cent available chlorine. The lithium hypochlorite formulation was prepared by physically mixing the concentrated product with anhydrous granular sodium sulfate. Stability data for the organic bleach formulations apply to four chlorinated cyanuric compounds made by admixing these materials with a spray-dried base bead to yield the following composition:

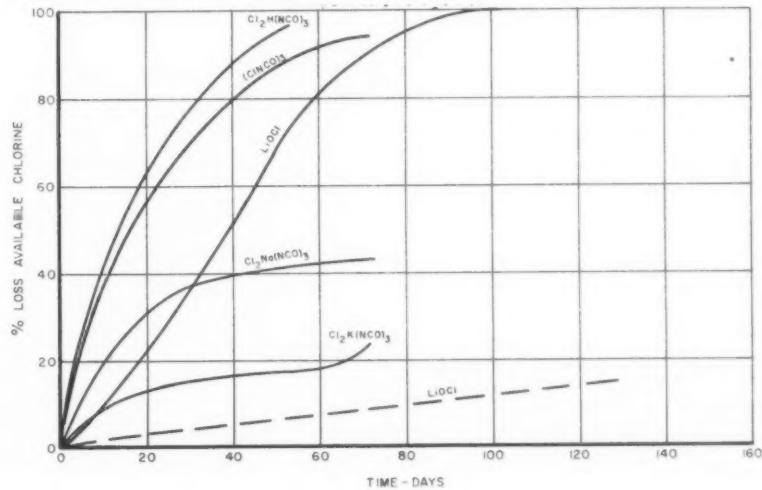
	%
Available chlorine	7.5
Sodium tripolyphosphate	35.0
Dodecylbenzene sulfonate	2.2
Moisture	1.0
Sodium sulfate	Balance

(Turn to Page 122)

**Figure IV. Comparison of Stability of Dry Household Bleaches**  
 $\text{LiOCl}$  vs. Chlorinated Cyanuric Acids\*

Formulation and preparation: See text. Nominal Av.  $\text{Cl}_2$  - 7.5%  
 Storage: 90°F./85% R.H. Container: Chlorinated cyanuric acids — chipboard  
 carton with foil overwrap.  
 $\text{LiOCl}$  — composite fiber — solid line — polyethylene — dashed line

\*Chlorinated cyanuric acid data from Monsanto Chemical Co. technical bulletin I-177, Sept., 1960.





## Waxed Floors Are Safe

By **J. Vernon Steinle, Ph.D.\***

S. C. Johnson & Son, Inc.  
Racine, Wis.

**T**HE legal factors involved in liability suits arising from falls on floors were discussed by John Conner in the August issue of *Soap and Chemicals Specialties*. Where negligent use of wax is alleged, I shall attempt to discuss the technical facts pertinent to such suits and their defense and try to outline, from a technical point of view, some aids for the defense attorney and the expert technical witness.

### Part I

The central theme of our discussion revolves around slipping and falling on waxed floors. The action of slipping and falling is obvious and needs no explanation, but when one attempts to point out or litigate the cause of the slip that is another matter. If it is claimed that a surface (a waxed floor, for example) is slippery, there must exist a method for de-

termining that contention and for measuring its degree.

Slipperiness is a comparative property and, if it is to be measured, any numerical constant applied must be compared with a similar constant which is normal for the majority of surfaces used for the same purpose. For example, a skating rink should be very slippery and a dance floor moderately so; on the other hand, a running track should provide a surface (like cinders) where the athlete can obtain a firm purchase to provide for maximum forward movement. But a floor surface found in the home and places of business has properties far different from either of these extremes. I contend that the normal properties of such walkway surfaces are the properties of a waxed floor, since statistically the most commonly used method of maintaining floor surfaces is to wax them.

All attempts to measure the slipperiness of walkway surfaces

have centered around the attempt to measure one of the factors involved in slip, that is, the coefficient of friction. Technically, the coefficient of friction is the ratio resulting from dividing the force required to move one surface over the other by the force pressing the two surfaces together. Various pieces of apparatus have been devised to measure this factor on walkway surfaces. The two machines most commonly employed are the James and Sigler machines. The James machine measures the static coefficient of friction by attempting to simulate conditions under the sole of the foot during the middle and latter movements of the stride. The Sigler machine is a dynamic impact type of tester which supposedly simulates heel impact conditions.

In all discussions of coefficients of friction of walkway surfaces, it must be remembered that the characteristics of not just one material are being pinpointed but

\*Paper presented during 47th midyear meeting, Chemical Specialties Manufacturers Assn., Chicago, May 16, 1961.

rather the combination of three different materials: the shoe, the maintenance material (wax), and the substrate. A.S.T.M. Committee D-21 has been studying these machines and other apparatus for measuring coefficients of friction on floors for a number of years. In their published conclusions on *The Significance of Coefficient of Friction Measurements in Evaluating the Slip Resistance of Floor Waxes*, they stated, "It is now generally accepted by those engaged in this study that machine measurements of the coefficient of friction can not correlate in all cases with foot tests on the floor or with safety in use." They also stated, "There are presently no standards of floor safety that can be expressed in terms of accident frequency, coefficient of friction or subjective foot tests in the field."

Setting aside for the moment the question of correlation of coefficients of friction with actual slip and fall, let us consider what the findings have been, using the existing apparatus for measurement. In general, it can be stated that the coefficients of friction of waxed floors, as compared with the same floor coverings unwaxed, show only small differences. It is particularly noteworthy that in a very large number of cases the coefficient of friction for the unwaxed surface is lower than for the same surfaces waxed, that is, the unwaxed surface is the more slippery. The Underwriters' Laboratories of Chicago, who test industry products in the field of floor waxes for their safety and who published from these findings a list of "Antislip Materials," (for many years) used as their criterion for in-

clusion on that list the requirement that the coefficient of friction of the waxed surfaces be greater than the coefficient of friction for the same surface unwaxed. These tests were made on a variety of standard floor coverings. More recently the listing, now called "Floor Coating and Finishing Materials," has been broadened to include any wax product having a coefficient of friction greater than 0.5 as measured on an asphalt tile. Most commercial waxes are included on the Underwriters list.

#### **Factors in Slipping**

In addition to correlating measurements of coefficients of friction with slipping accidents, it must be emphasized that the coefficient of friction of the floor surface is only *one* of the factors involved in slipping and falling. Some years ago the National Safety Council appointed a committee to study the subject of "Safe Walkways" and sponsored work at the Bureau of Standards covering this investigation. One of the results of this work at the Bureau was the development of the Sigler machine. As a result of the studies of this committee, of which I was a member, and from other investigations, I have come to the conclusion that the principal factors involved in slipping and falling on a walkway surface can be divided into four categories of three factors each.

The first category is the floor surface. The three factors relating to it are:

1. The coefficient of friction — floor vs. the sole of the shoe.
2. The presence of foreign substance on the floor, such as water, trash, etc.

3. The condition or state of repair of the floor, i.e., the presence of a ramp, damaged or missing sections of the floor covering, etc.

The second category is the individual's shoe. The factors involved are very similar to those listed in the first category.

1. The coefficient of friction — the sole of the shoe vs. the floor.
2. The presence of a foreign substance on the sole or heel of the shoe. Such material can be as easily found on the shoe as on the floor.
3. The condition or state of repair of the shoe, i.e., women's spike heels, run down heels, holes in the sole, etc.

The third category is the physical condition of the individual. The factors are:

1. The method of walking. Studies by the Bureau of Standards using candid motion pictures show a wide variation in the way people walk. This is revealed in the length of stride, the manner in which the foot comes in contact with the walkway surface, etc.
2. Distribution of forces. Again studies by the Bureau using a machine especially designed for the purpose show individuals vary to a great degree in the distribution of the vertical, longitudinal and lateral forces exerted in walking.
3. The physical condition of the individual. Actual lameness or other physical disabilities may definitely contribute to a slip or fall.

The fourth category is the mental condition of the individual. The factors are:

1. Sanity. The individual who is not in possession of all of his mental faculties poses a different risk from the perfectly sane individual. (In this regard it is of interest to note that a great many hospitals, including mental institutions, regularly maintain their floors with wax.)

#### **Technical facts which may be helpful to defense in law suits involving charges of negligence in the use of floor wax.**

2. Psychology. To me this is the most important of the twelve factors. I have proved by experiments that the manner in which people walk and slip is affected by what they see. To most people gloss means slipperiness. I have conducted an experiment where I had 100 people walk over two surfaces, one glossy, the other not. They did this twice, once blindfolded and once not. When they saw the floors there was an almost unanimous agreement that the glossy floor was the more slippery. When they were blindfolded this was not the case. About half of the walkers thought the duller floor was the more slippery. The state of mind of the individual at the time of the accident is of equal importance. The burdens of our minds affect our physical actions more than we care to admit.

3. Proneness to accidents. It is a well known fact that certain individuals are prone to accidents, and I have found from experience that often the history of individuals who slip and fall on floors shows that they have been involved in other accidents.

In Mr. Conner's paper, various points were raised which have been vital in cases cited where negligence has been claimed in connection with an accident of slipping and falling on a waxed floor. He has suggested that I discuss some of these points from the technical viewpoint.

#### **Negligence in Waxing**

We will start with the premises as he indicated that waxing a floor does not within itself create any liability and that the fact that a floor is slippery does not of itself constitute negligence, but that it may be negligence to wax floors in such a fashion that they become *dangerously* slick.

I contend that a properly maintained waxed floor is not

"dangerously slippery." On the other hand, certain undesirable practices involving a waxed floor may produce "dangerously slippery" conditions.

Allowing traffic on a freshly waxed floor before it dries is dangerous and negligent. Care should be taken on damp days to see that enough time is allowed because of slower drying conditions. Certain self-polishing waxes may revert to the undried state and become soft and slippery when exposed excessively to water.

If the wrong wax, such as a solvent type wax on an asphalt tile floor, is used a dangerous condition results since the floor covering is soluble in the wax solvent and becomes soft and slippery.

Accumulations of wax, gobs of wax, uneven coating, heavy coats or multiple coats are often contended to produce dangerous conditions. Two facts tend to contradict this: one, a coat of wax has a film thickness of only 0.2 to 0.5 mil.; two, the surface of the succeeding coat is identical in its properties to the surface of the first coat. The contention is a fallacy.

It is also contended that sweeping a waxed floor with a stiff broom removes non-slip properties and that buffing the floor increases its slipperiness. These contentions do not correspond with the results of coefficient of friction measurements.

The waxing of inclined areas, hallways and at the end of

Dr. J. Vernon Steinle



matted areas have been considered to be negligence. Since the coefficient of friction of the waxed floor is generally greater than the same floor unwaxed a less slippery condition should, generally, result.

Waxing deformed areas, that is, a poorly laid floor or one in poor repair, is contended to be negligence. Waxing is not involved, the mere presence of such areas may be dangerous.

Dim lighting of waxed floors has been considered as negligent. Dim light may be dangerous but no more so on waxed than on unwaxed floors.

The presence of foreign matter on the floor is very often the key point in negligence suits resulting from slips or falls. Such conditions are dangerous on all walkway surfaces. Water is the one foreign material which is more dangerous on waxed than unwaxed floors since many self-polishing waxes soften and become slippery when exposed to excessive amounts of water, and water acts as a lubricant on the hydrophobic solvent type waxes.

Skid marks in the wax coatings are often presented as evidence of excessive waxing resulting in a dangerous condition. Skid marks may show on a surface with a single coat of wax since wax is a plastic and moves under pressure. The idea that these skid marks are indentations in a waxed film on a floor is preposterous in view of the minimum thickness of even multiple coats of wax.

Finally, some courts have evolved the theory that some types of floors are so hard that any waxing constitutes negligence. This only points out to me that these courts did not have the benefit of sound information or the testimony of competent experts. In the first place, the exposed surfaces of wax are practically identical in their physical properties regardless of the underlying surface; and also, in general, the coefficients of friction of hard floorings are lower than

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# Looking into future of the Automotive Chemical Specialties Market

By James W. Partner\*,

Audits and Surveys Co.,  
New York



**M**ANUFACTURERS in most household and personal product markets measure long range progress year after year against growth in population or — perhaps — the increase in households. Since our population is growing by slightly more than three per cent a year, an increment of like amount in, for example, the shampoo market is expected.

Using the same general rule of thumb, your business in automotive specialties should be increasing over the years gradually as car population, or, perhaps, car usage, expands. Figures on motor vehicle registrations and car usage in recent years — as compiled by the U. S. Bureau of Public Roads — suggest that automobile usage is increasing at least as rapidly as population, and perhaps more so. The annual increase must appear to be several hundred per cent to anyone driving on a major highway on a Sunday afternoon.

But how about the automotive specialty business? Is its unit or gallonage volume keeping pace — that is, growing some 3 to 4 per cent annually? It is our belief that it probably is not. Analysis of retail volume in this field reveals less progress than in most other mar-

kets that we measure. There are notable exceptions of course. For example, an enormous expansion in the sale of windshield de-icing chemicals occurred this past season. And the volume in some forms of automobile polishes has surged ahead in the last year or so.

However, these are dramatic exceptions. And the degree of attention directed to them underscores on one hand how unusual they are, and on the other, how comparatively static the sale of most automotive specialties has been. What of the future? Should we anticipate an increase, decrease, or a rate of progress similar to that of the past five years? A number of trends are at work currently in the market and their assessment will help us to answer this question. These center around the automobile itself, the consumer, and our retail distribution structure.

## Design, Promotion Changes

For more than 30 years, the major factor in the promotion and sale of automobiles has been styling. There is no denying the continued importance of this element: The annual model change underscores it. But in the last few years, auto makers have produced cars with built-in features which automatically limit the continued sale of certain automotive specialties.

The introduction and promotion of improved paint finishes, the use of chemical dips in manufacture to minimize rust and the partial substitution of stainless steel or aluminum for chrome trim act to reduce the demand for the automotive cosmetics — waxes and chrome cleaners.

More recently, the claim by one major manufacturer that his automobiles do not require frequent oil change or lubrication is potentially an even greater limiting factor to the sale of all automotive specialties. It is our observation that gasoline station attendants do not sell: They are order takers, the order being in the form of "Ten gallons, please" or "Fill 'er up." Sales of specialties are most likely to occur when the driver gets out of the car and has some time — however brief — on his hands. This is the time the merchandise on display in the station is likely to be sold and any development which reduces the time a driver spends outside of his car in a service station will reduce the possibility of these impulse sales. Improvements in tires permitting less frequent checking of tire pressure has already reduced this time in the service station. Reduction in the frequency of service for lubrication and oil changes will have an even greater effect.

\* Paper presented at 47th midyear meeting, Chemical Specialties Manufacturers Ass'n., Chicago, May 16, 1961.



Claimed to be a new kind of auto care product is "Holiday" by S. C. Johnson & Son, Inc. Applied with damp sponge, product dries to haze that is wiped off.

particularly if all major manufacturers move in this direction.

Several other characteristics of some current model automobiles should also be noted briefly. The trend toward aluminum engines produces the need for different automotive specialties. For example, cooling system products, may have to be modified in order to perform satisfactorily in the presence of this metal. And the introduction of air-cooled engines has an obvious limiting influence on the sales of anti-freezes, radiator flushes, and other radiator products. Since the sale of cars incorporating both of these features is increasing, a corresponding further modification in the size of the market for cooling system products must be anticipated.

Finally, the introduction and growing importance of compact cars exerts a modest limitation on the sales of numerous automotive specialties. The smaller size of these vehicles — both in terms of engine and overall dimensions — means obviously that a smaller quantity of polish, cleaner, or oil additive is needed than in the case of their larger cousins. (These compacts pose another challenge to the formulator: The need for repackaging of many products in smaller quantities.) However, while the compact may limit the demand for

## Fate of automotive specialties industry hangs on ability to adapt to change in auto designs and in promotion, new consumer attitudes, and retail distribution trends.

automotive specialties in the next year or so, the long-run effect may be favorable. This presumes, of course, that the compact car will encourage the sales of automobiles generally, making possible more two and even three-car families.

Overall, however, it seems that trends operating in the design and promotion of automobiles are slowing the rate of growth in sales of automotive specialty products. Trends relating to the motor car, however, tell only a part of the story. Let us turn to the consumer and his changing buying habits.

### Consumer Attitudes

There has been much debate in recent years concerning what the American motorist wants in his automobile. The decline in sale of the so-called medium-priced cars led to the feeling that the automobile was losing some of its prestige or status value to the buyer.

The growth in boating, in outdoor living centered around the patio — even the expanding volume in family swimming pools — has led many observers to the belief that the automobile, if still a symbol of status, is, nevertheless, now sharing its status value with other important consumer expenditures. Extending this argument, it was felt that the motorist was now more interested in the automobile for transportation's sake, at least to a greater degree than in previous years.

This interpretation of consumer attitudes together with the growing volume in economical foreign-made cars led to the belief that smaller American cars priced around \$2,000 would be popular.

The resulting series of compact vehicles which have now appeared have enjoyed a measure of success. These cars have captured

(Turn to Page 91)

With growing popularity of convertibles, market for plastic cleaners is growing. Shown is "Surefire" anti-static plastic cleaner of Wilco Co., Los Angeles. Product, which is claimed to repel dust, is said also to produce on plastic a protective film that prevents scratching and fogging.





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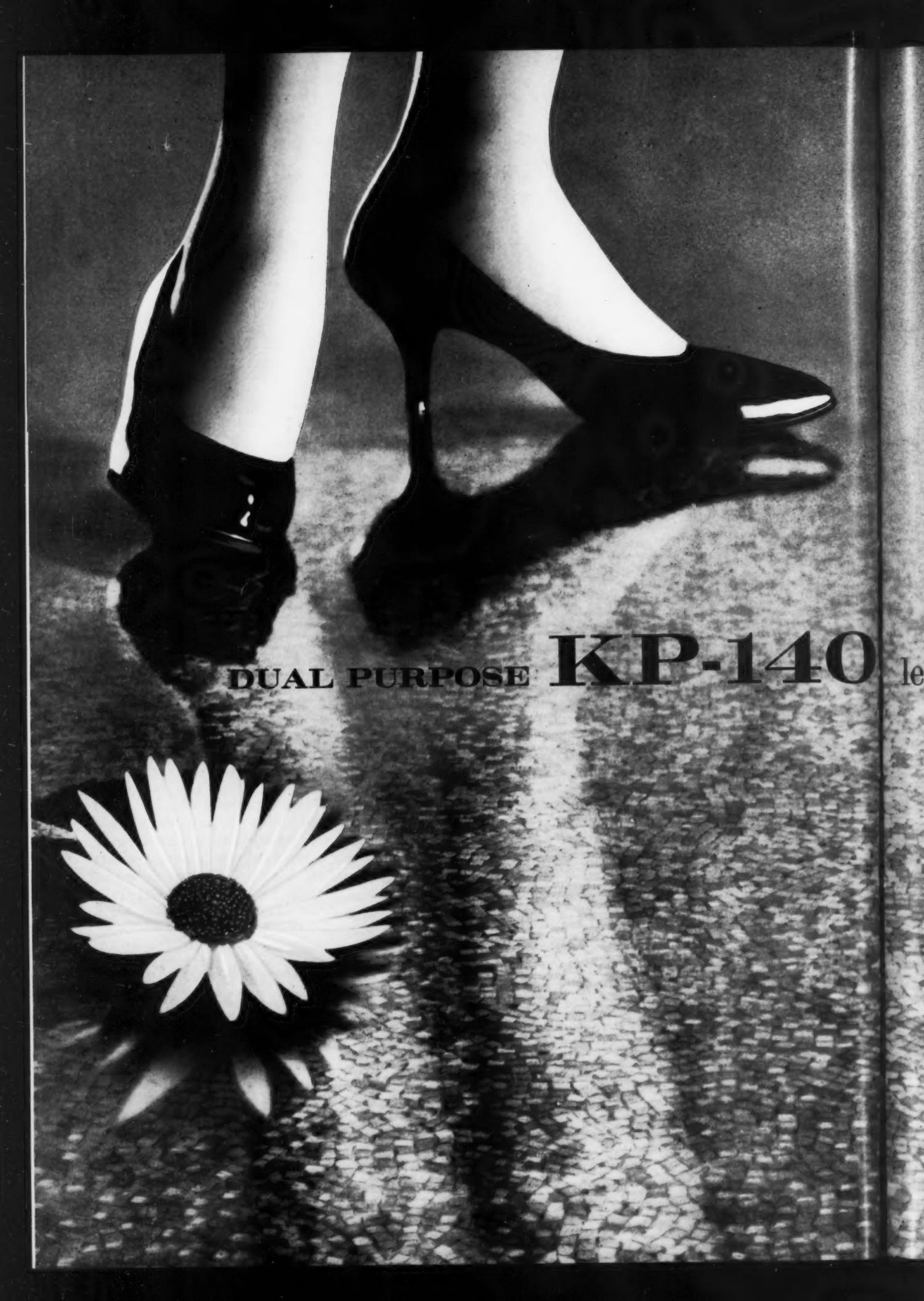
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Two test strips on black rubber tile show "drawing in" and crazing in floor polish films which do not contain KP-40. Tile on right shows same formulation with KP-140 added.



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*Reg L. Jones*

PRESIDENT

*For further information, please write to*

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## Automotive Specialties Marketing

(From Page 84)

nearly a third of the total volume in recent months and further sales expansion is predicted. But, the motorist has not reacted fully as expected. For, while these economical cars have been accepted, the more luxurious or deluxe versions of several brands have been surprisingly strong sellers. To further compound the problem, however, sales of the compact versions of a number of medium-priced lines — which tend to be more deluxe in character — have not been spectacular. The question arises: Does the consumer really want economical transportation?

The difficulties of the automobile industry in trying to gauge the mind of the American consumer are certainly not unique. We see hundreds of illustrations each year of manufacturers failing to understand their consumers. This is particularly evident where a new product is being introduced. How many manufacturers have seen products regarded as highly promising in the laboratory, sell rather poorly when finally placed on the market?

Although it is difficult to determine the elements affecting consumer choice, one consumer desire certainly seems to be gaining in importance not only in the automotive specialty field but elsewhere. This is the consumer interest in convenience; in easy-to-use products. A review of our records reveals that this is the thread uniting most successful new products in recent years: The dandruff remedy incorporated in a shampoo is successful: The product requiring two stages — treatment and then shampoo sells poorly, even though the results are better. The new shoe polish which is so very easy to apply, the immersible electric skillet which permits total submersion in water in cleaning versus the non-immersible version, all tell the same story.

We need not even look beyond the automotive specialties field for examples. The trend in sales of automobile polishes in the past decade has been away from items requiring two steps — a separate cleanser and a separate polish — to brands accomplishing both objectives in one application, hence to aerosol to "wash-and-shines", and, now, in 1961 to an impregnated sponge which provides the convenience of the applicator as well as the chemical material to impart a wax film while cleaning the finish.

Indeed, the whole aerosol revolution points up how highly the consumer esteems convenience. This does not imply that other factors are not important to the consumer. Cost of the item in relation to quality, dealer reputation, manufacturer's name, etc., all enter into the buying decision. Cost, in particular, is of great concern to many buyers: How else can we explain the substantial anti-freeze volume moving to the consumer through self-service outlets? But cost, even in times of recession, often seems to be of less consequence

than convenience. Consider the aerosol windshield de-icing product which sold so very well last winter at a price many times that of a scraper.

A corollary observation with respect to convenience should be made. As products become easier to use it is likely that women will be more interested in them. At present, nearly two-fifths of the motorists in the United States are women, according to the Automobile Manufacturers Association. Does the automotive specialties manufacturer recognize this in his promotion and packaging? Or, is he still advertising and selling only to men? Recognition of the consumers' increasing interest in convenient, easy-to-use products and the growing significance of women as buyers could lead to action stimulating sales. For example, does your package indicate clearly — preferably with illustrations — and in non-technical language what the product will do? It should, if it is to sell to women as well as men in self-service outlets.

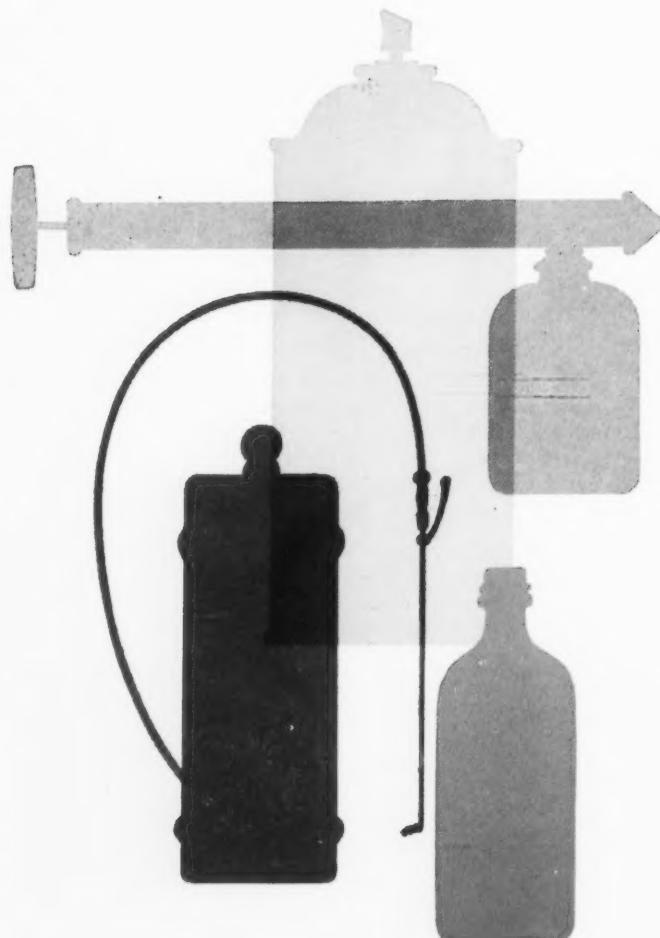
As shoppers we are all aware of the numerous changes in retailing that have occurred since supplies became plentiful following World War II. During this period the words "shopping center" and "discount house" came into our language. Significant trends to-

Another new automotive chemical specialty in a pressure package is Du Pont's new, dry aerosol lubricant, "Slickspray," which forms ultra-slick film on any surface, the maker says. Range of applications includes hinges, locks, doors, window guides, auto brake backing plates.





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ward self-service and automatic vending have appeared. And retailers, following the example of drug stores in prior years, have experimented with the sales of many items outside of what might be termed the traditional line for the store. As a result, we find in 1961 hardware in food stores, food in discount merchandisers, rock and roll records in hardware stores, and garden centers in variety stores.

How well has the distribution of automotive specialties kept pace with these developments? Are these items moving in greater quantities through non-traditional channels or are they still to be found primarily in the gasoline stations, hardware stores, car dealers and automotive supply stores of old?

Our data at Audits and Surveys reveal that these products are moving more and more through the non-traditional channels like food stores and discount merchandisers. But, there is also strong evidence that this transition has occurred — indeed, is occurring — more slowly than in the case of other products we study.

In our work, we continually analyze the breadth of distribution of hundreds of brands of products. Indeed, we have just completed a study of this nature in

over 32,000 retail establishments of all types across the nation. In such a study we usually find that one or more of the best-selling brands enjoys wide distribution: That is, they are found in retailers that do at least 85 and often 90-95 per cent of all of the business in the type of product. This is true in the case of cosmetics, writing instruments, and the less expensive household electrical appliances.

In the automotive specialties field the distribution of the best selling items is not so broad. In fact, currently the brand in greatest distribution of all of these items that we measure is exposed to only 77 percent of the total business. We often note that manufacturers compete less directly with each other in the marketing of automotive specialties than in most other products that we study. Some brands, in other words, are available primarily in gasoline stations, automotive stores and hardware outlets while others are found primarily in food outlets and to lesser extent in the more conventional automotive channels.

The implications of this situation are clear: If your distribution is not in tune with current retail conditions you are penalizing yourself, since the consumer has less opportunity to purchase your

product. It is our belief that many automotive specialties are not so well distributed in the changed retail market today than they were ten years ago. Retail distribution has been changing more rapidly than manufacturers have realized.

### Summary

It is evident to this observer that sales of most automotive specialties do not show the vitality we see associated with other types of products. Developments within the automobile industry itself are contributing to the emerging pattern of sales. Insofar as cars in the future will require less care and maintenance the opportunity for sales of many specialties is reduced.

To meet this challenge, ingenuity in the design and marketing of new products is required. We recommend that research efforts be directed toward products which not only fill a need but are easy to use. For instance, is there a chemical which might be applied through the windshield washing apparatus, or as an aerosol, that would dissipate rain droplets and, thus eliminate the need for the wiper? Is there a compound that will truly clean the plastic rear window in a convertible? How about a chemical for application to tires to eliminate or minimize skidding during the early stages of a rainstorm when the pavement is especially slippery? Such a product would probably necessitate a system of application permitting the driver to push a button to insure that it meets the convenience requirement.

Finally, we recommend closer and continual appraisal of distribution channels and methods. The pace and tempo of change in retail distribution has been exceptionally rapid in recent years. There is every evidence that further shifts will occur. For example, grocery supermarkets are rapidly moving in the direction of mass merchandisers of all types of products, including automotive specialties. Unless your brands are rep-

(Turn to Page 108)



New spray for melting ice and snow on car windows was just announced by Speco, Inc., Cleveland. 16-ounce aerosol spray can of "Ice Rem Windshield De-Icer" retails for 98 cents.

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# Revised Labeling Regulations

## Complete text of revised regulations for enforcing Federal Hazardous Substances Labeling Act, effective February 1, 1962.

### SUBCHAPTER D—HAZARDOUS SUBSTANCES PART 191 — HAZARDOUS SUBSTANCES: DEFINITIONS AND PROCEDURAL AND INTERPRETATIVE REGULATIONS

#### DEFINITIONS AND INTERPRETATIONS § 191.1 Definitions.

(a) *Act.* "Act" as used in this part means the Federal Hazardous Substances Labeling Act.

(b) *Commissioner.* "Commissioner" means the Commissioner of Food and Drugs, Food and Drug Administration, Department of Health, Education, and Welfare.

(c) *Containers.* "Container intended or suitable for household use" means any carton, bottle, can, bag, tube, or any other container which under any customary or reasonably foreseeable condition of purchase, storage, or use may be brought into or around a house, apartment, or other place where people dwell, or in or around any related building or shed, including but not limited to a garage, carport, barn, or storage shed. The term includes containers of such articles as polishes or cleaners designed primarily for professional use, but available in retail stores such as hobby shops for nonprofessional use. Also included are such items as antifreeze and radiator cleaners that, although principally for car use, may be stored in or around dwelling places. The term does not include industrial supplies that might be taken into a home by a serviceman. An article labeled as and marketed solely for industrial use does not become subject to this act because of the possibility that an industrial worker may inappropriate a supply for his own use. Size is not the only index of whether the container is "suitable for household use." The test shall be whether under any reasonably foreseeable condition of purchase, storage, or use the container may be found in or around a dwelling.

(d) *Prominently and conspicuously.* "Prominently" in section 2(p) (2) and "conspicuously" in section 2(p) (1) and (p) (2) of the act means that, under customary conditions of purchase, storage, and use, the required information shall be visible, noticeable, and in clear and legible English. Some factors affecting a warning's prominence or conspicuously

ness are: Location, size of type, and contrast of printing against background. Also bearing on the effectiveness of a warning might be the effect of the package contents if spilled on the label. Unless impracticable because of the nature of the substance, the label shall be of such construction and finish as to withstand reasonably foreseeable spillage through foreseeable use. (See § 191.101.)

(e) *Highly toxic substances.* "Highly toxic" is any substance falling within any of the following categories:

(1) Any substance that produces death within 14 days in half or more than half of a group of white rats each weighing between 200 grams and 300 grams at a single dose of 50 milligrams or less per kilogram of body weight, when orally administered.

(2) Any substance that produces death within 14 days in one-half of a group of white rats each weighing between 200 grams and 300 grams when inhaled continuously for a period of 1 hour or less at an atmospheric concentration of more than 200 parts per million but not more than 20,000 parts per million by volume of gas or vapor or more than 2 milligrams but not more than 200 milligrams per liter by volume of mist or dust, provided such concentration is likely to be encountered by man when the substance is used in any reasonably foreseeable manner.

(3) Any substance that produces death within 14 days in half or more than half of a group of rabbits weighing between 2.3 kilograms and 3.0 kilograms each, tested at a dosage of more than 200 milligrams per kilogram of body weight but not more than 2 grams per kilogram of body weight, when administered by continuous contact with the bare skin for 24 hours or less by the method described in § 191.10.

The number of animals tested shall be sufficient to give a statistically significant results and be in conformity with good pharmacological practices.

(4) Any substance determined by the Commissioner to be "highly toxic" on the basis of human experience.

(f) *Toxic substances.* "Toxic substances" is any substance falling within any of the following categories:

(1) Any substance that produces death within 14 days in one-

half of a group of white rats each weighing between 200 grams and 300 grams, at a single dose of more than 50 milligrams per kilogram but not more than 5 grams per kilogram of body weight, when orally administered. Substances falling in the toxicity range between 500 milligrams and 5 grams per kilogram of body weight will be considered for exemption from some or all of the labeling requirements of the act, under § 191.62, upon a showing that, because of the physical form of the substance (solid, a thick plastic, emulsion, etc.), the size or closure of the container, human experience with the article, or any other relevant factors, such labeling is not needed.

(2) Any substance that produces death within 14 days in one-half of a group of white rats each weighing between 200 grams and 300 grams, when inhaled continuously for a period of 1 hour or less at an atmospheric concentration of more than 200 parts per million but not more than 20,000 parts per million by volume of gas or vapor or more than 2 milligrams but not more than 200 milligrams per liter by volume of mist or dust, provided such concentration is likely to be encountered by man when the substance is used in any reasonably foreseeable manner.

(3) Any substance that produces death within 14 days in one-half of a group of rabbits weighing between 2.3 kilograms and 3.0 kilograms each, tested at a dosage of more than 200 milligrams per kilogram of body weight but not more than 2 grams per kilogram of body weight, when administered by continuous contact with the bare skin for 24 hours by the method described in § 191.10.

The number of animals tested shall be sufficient to give statistically significant results and be in conformity with good pharmacological practice.

(4) Any substance that is "toxic" (but not "highly toxic") on the basis of human experience.

(g) *Irritants.* The term "irritant" includes "primary irritant to the skin" as well as substances irritant to the eye or to mucous membranes.

(2) The term "primary irritant" means a substance that is not



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corrosive and that the available data of human experience indicate is a primary irritant; or which results in an empirical score of five or more when tested by the method described in § 191.11.

(3) *Eye irritants.* A substance is an irritant to the eye mucosa if the available data on human experience indicate that it is an irritant for the eye mucosa, or when tested by the method described in § 191.12 shows that there is at any of the readings made at 24, 48, and 72 hours discernible opacity or ulceration of the cornea or inflammation of the iris, or that such substance produces in the conjunctivae (excluding the cornea and iris) a diffuse deep-crimson red with individual vessels not easily discernible, or an obvious swelling with partial eversion of the lids.

(h) *Corrosive.* A "corrosive substance" is one that causes visible destruction or irreversible alterations in the tissue at the site of contact. A test for a corrosive substance is whether, by human experience, such tissue destruction occurs at the site of application. A substance would be considered corrosive to the skin, if when tested on the intact skin of the albino rabbit by the technique described in § 191.11 the structure of the tissue at the site of contact is destroyed or changed irreversibly in 24 hours or less. Other appropriate tests should be applied when contact of the substance with other than skin tissue is being considered.

(i) *Strong sensitizer.* A "strong allergic sensitizer" is a substance that produces an allergic sensitization in a substantial number of persons who come into contact with it. An allergic sensitization develops by means of an "antibody mechanism" in contradistinction to a primary irritant reaction which does not arise because of the participation of an "antibody mechanism." An allergic reaction ordinarily does not develop on first contact because of necessity of prior exposure to the substance in question. The sensitized tissue exhibits a greatly increased capacity to react to subsequent exposures of the offending agent. Thus, subsequent exposures may produce severe reactions with little correlation to the amounts of excitant involved. A "photodynamic sensitizer" is a substance that causes an alteration in the skin or mucous membranes, in general, or to the skin or mucous membrane at the site to which it has been applied, so that when these areas are subsequently exposed to ordinary sunlight or equivalent radiant energy an inflammatory reaction will develop.

(j) *Extremely flammable and flammable substances.*—(1) *Extremely flammable substances.* The term "extremely flammable" means any substance that has a flashpoint at or below 20° F., as determined by the method described in § 191.13.

(2) *Flammable substances.* The term "flammable" means any sub-

stance that has a flashpoint of above 20° F., to and including 80° F., as determined by the method described in § 191.13.

(k) *Extremely flammable and flammable solids.*—(1) *Extremely flammable solids.* A solid substance is "extremely flammable" if it ignites and burns at an ambient temperature of 80° F. or less when subjected to friction, or to percussion, or to an electrical spark.

(2) *Flammable solids.* A solid substance is "flammable" if, when tested by the method described in § 191.14, it ignites and burns with a self-sustained flame at a rate greater than 1/10 of an inch per second along its major axis.

(l) *Extremely flammable and flammable contents of self-pressurized containers.*—(1) *Extremely flammable contents.* Contents of self-pressurized containers are "extremely flammable" if when tested by the method prescribed in § 191.15, flashback (a flame extending back to the dispenser) is obtained at any degree of valve opening and the flashpoint, when tested by the method described in § 191.16, is less than 20° F.

(2) *Flammable contents.* Contents of self-pressurized containers are "flammable" if when tested by the method described in § 191.15 a flame projection exceeding 18 inches is obtained at full valve opening or a flashback (a flame extending back to the dispenser) is obtained at any degree of valve opening.

(m) *Substances that generate pressure.* A substance is hazardous because it "generates pressure through decomposition, heat, or other means" if:

(1) It explodes when subjected to an electrical spark, or to percussion, or to the flame of a burning paraffin candle for 5 seconds or less; or

(2) It expels the closure of its container, or bursts its container, when held at or below 130° F. for 2 days or less; or

(3) It erupts from its opened container at a temperature of 130° F. or less, after having been held in the closed container at 130° F. for 2 days.

(n) *Radioactive substance.* The term "radioactive substance" means a substance which, because of nuclear instability, emits electromagnetic and/or particulate radiation that is capable of producing ions in its passage through matter. Source materials, special nuclear material, and byproduct materials described in section 2(f) (3) of the act are exempt.

(o) *"Accompanying literature".* "Accompanying literature" as used in section 2(n) of the act means any placard, pamphlet, booklet, book, sign, or other written, printed, or graphic matter or visual device which provides directions for use, written or otherwise, and is used in connection with the display, sale, demonstration, or merchandising of a hazardous sub-

stance in a container intended or suitable for household use.

(p) *Substantial personal injury or illness.* This term means any illness or injury of a significant nature. It need not be severe or serious. What is excluded by the word "substantial" is a wholly insignificant or negligible injury or illness.

(q) *Proximate result.* A proximate result is one that follows in the course of events without an unforeseeable, intervening, independent cause.

(r) *Reasonably foreseeable handling or use.* This includes the reasonably foreseeable accidental handling or use, not only by the purchaser or intended user of the product, but by all others in a household, especially children.

#### § 191.2 Human experience with hazardous substances.

Reliable data on human experience with any substance should be taken into account in determining whether an article is a "hazardous substance" within the meaning of the act, and when such data give reliable results different from results with animal data, the human experience takes precedence. Experience may show that an article is more or less toxic, irritant, or corrosive to man than to test animals. Experience may also show other factors that are important in determining the degree of hazard to humans represented by the substance. For example, that radiator antifreeze is likely to be stored in the household or garage and likely to be ingested in significant quantities by some persons. Experience also indicates that a particular substance in liquid form is more likely to be ingested than is the same substance in a paste or a solid and that an aerosol is more likely to get into the eyes and the nasal passages than is a liquid.

#### § 191.3 Hazardous mixtures.

For a mixture of substances, the determination of whether such mixture is "hazardous" as defined in section 2(f) of the act should be based on the physical, chemical, and pharmacological characteristics of the mixture. A mixture of substances may therefore be less hazardous or more hazardous than its components because of synergistic or antagonistic reactions. It may not be possible to reach a fully satisfactory decision concerning the toxic, irritant, corrosive, flammable, sensitizing, or pressure-generating properties of a substance from what is known about its components or ingredients. It is prudent to test the mixture itself.

#### § 191.4 [Reserved]

#### § 191.5 [Reserved]

#### § 191.6 Listing of "strong sensitizer" substances.

The Commissioner of Food and Drugs, having considered the frequency of occurrence and the severity of reactions, finds the following sub-

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Pyrenone for insect-proofing packages  
Pyrenone Dri-Die residual roach and ant sprays (pressurized)  
Pyrenone industrial sprays  
Pressurized cow sprays  
Pyrenone and Dri-Die insect powders  
Midget aerosols  
Emulsifiable garden sprays  
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Livestock face fly sprays  
Rotenone emulsifiable fish killer  
Synergized Rotenone fish killer  
Emulsifiable grain protectant  
Institutional sprays  
Aerosol food plant sprays  
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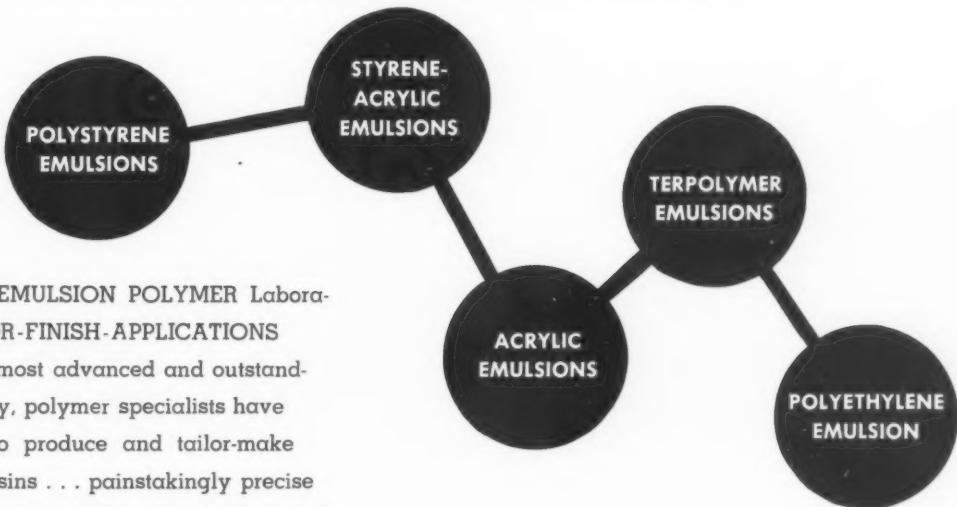
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stances to have a significant potential for causing hypersensitivity, and therefore they meet the definition for "strong sensitizer" as given in section 2(k) of the act.

(a) Paraphenylenediamine and products containing it.

(b) Powdered orris root and products containing it.

(c) Epoxy resins systems containing in any concentration ethylenediamine, diethylenetriamine, and diglycidyl ethers of molecular weight of less than 200.

(d) Formaldehyde and products containing 1 percent or more of formaldehyde.

(e) Oil of bergamot and products containing 2 percent or more of oil of bergamot.

#### § 191.7 Products requiring special labeling under section 3(b) of the act.

(a) Human experience as reported in the scientific literature and to the Poison Control Centers and the National Clearing House for Poison Control Centers establishes that the following substances are hazardous because of their toxicity and the frequency of their involvement in accidental ingestion:

(1) Carbon tetrachloride and mixtures containing it.

(2) Diethylene glycol including mixtures containing 10 percent or more by weight of diethylene glycol.

(3) Ethylene glycol including mixtures containing 10 percent or more by weight of ethylene glycol.

(4) Petroleum distillates such as kerosene, mineral seal oil, naphtha, gasoline, benzine, mineral spirits, paint thinner, Stoddard solvent, and related petroleum distillates and mixtures containing 10 percent or more by weight of such petroleum distillates.

(5) Methyl alcohol including mixtures containing 4 percent or more by weight of methyl alcohol.

(6) Turpentine including gum turpentine, gum spirits of turpentine, steam distilled wood turpentine, sulfate wood turpentine, and destructively distilled wood turpentine and mixtures containing 10 percent or more by weight of such turpentine.

(b) The Commissioner finds that these substances present special hazards and that the labeling required by section 2(p) (1) of the act is not adequate for the protection of the public health. Under section 3(b) of the act the following specific label statements are deemed necessary to supplement the labeling required by section 2(p) (1) of the act:

(1) *Carbon tetrachloride.* Because of the general systemic poisoning that might result from the ingestion or breathing of vapors of carbon tetrachloride and mixtures containing it, the label shall include the signal word "danger," the additional word "poison," and the skull and crossbones symbol. The statement of hazard shall include "May be fatal

if inhaled or swallowed," and "Avoid contact with flame or hot surface."

(2) *Methyl alcohol.* Because of death and blindness that might result from the ingestion of methyl alcohol, the label for this substance (including mixtures) within the percentages specified in paragraph (a) (5) of this section shall include the signal word "danger," the additional word "poison," and the skull and crossbones symbol. The statement of hazard shall include "Vapor harmful," "May be fatal or cause blindness if swallowed," and "Cannot be made nonpoisonous."

(3) *Turpentine and petroleum*

if ethylene glycol the statement "Harmful or fatal if swallowed" and for diethylene glycol the statement "Harmful if swallowed" are required.

#### TESTING PROCEDURES FOR HAZARDOUS SUBSTANCES

##### § 191.10 Method of testing toxic substances.

The method of testing the toxic substances named in § 191.1 (e) (3) and (f) (3) is as follows:

(a) *Acute dermal toxicity (single exposure).* In the acute exposures the agent is held in contact with the skin by means of a sleeve for periods varying up to 24 hours. The sleeve, made of rubber dam or other impervious material, is so constructed that the ends are reinforced with additional strips and should fit snugly around the trunk of the animal. The ends of the sleeve are tucked, permitting the central portion to "balloon" and furnish a reservoir for the dose. The reservoir must have sufficient capacity to contain the dose without pressure. In the following table are given the dimensions of surface exposed to the test substance. The sleeves may vary in size to accommodate smaller or larger subjects. In the testing of unctuous materials that adhere readily to the skin, mesh wire screen may be employed instead of the sleeve. The screen is padded and raised approximately 2 centimeters from the exposed skin. In the case of dry powder preparations, the skin and substance are moistened with physiological saline prior to exposure. The sleeve or screen is then slipped over the gauze which holds the dose applied to the skin. In the case of finely divided powders, the measured dose is evenly distributed on cotton gauze, which is then secured to the area of exposure.

##### DIMENSIONS OF SLEEVES FOR ACUTE DERMAL TOXICITY TEST (Test Animal Rabbits)

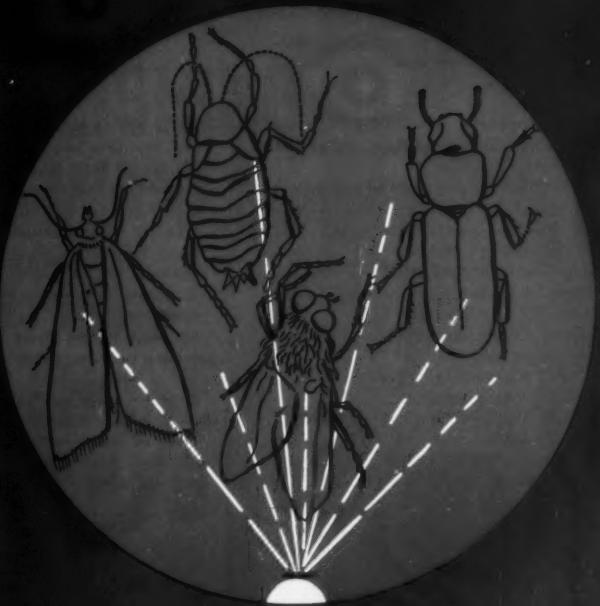
Measurements in centimeters	Range of weight of animals	Average area of exposure of total body surface	Average percentage
Diameter at ends	Over-all length	(cm <sup>2</sup> )	(cm <sup>2</sup> )
7.0	12.5	2,500-3,500	240

(b) *Preparation of test animals.* The animals are prepared by clipping the skin of the trunk free of hair. Approximately one-half of the animals are further prepared by making epidermal abrasions every 2 centimeters or 3 centimeters longitudinally over the area of exposure. The abrasions are sufficiently deep to penetrate the stratum corneum (horny layer of the epidermis), but not to disturb the derma—that is, not to obtain bleeding.

(c) *Procedures for testing.* The sleeve is slipped onto the animal, which is then placed in a comfortable but immobilized position in a multiple animal holder. Selected doses of liquids and solutions are introduced under the sleeve. If there is slight leakage from the sleeve, which may occur

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equipped with a constant level overflow so placed as to maintain the bath liquid level  $\frac{1}{8}$  inch below the rim of the glass cup.

(b) *Thermometer holder.* Support firmly with ringstand and clamp.

(c) *Thermometer.* For flashpoints above  $40^{\circ}$  F., use the ASTM Tag Closed Tester Thermometer, range of  $+20$  to  $+230^{\circ}$  F., in  $1^{\circ}$  F. divisions, and conforming to thermometer 9F. of ASTM Standard E 1. For flashpoints from  $20^{\circ}$  F. to  $40^{\circ}$  F., use ASTM Tag Closed Tester, Low Range, Thermometer 57F. For flashpoints below  $20^{\circ}$  F., use ASTM Thermometer 33F. The original Tag Open-Cup (Paper Scale) Thermometer will be a permissible alternate until January 1, 1962. It is calibrated to  $-20^{\circ}$  F.

(d) *Glass test cup.* Glass test cup (Fig. 2), of molded clear glass, annealed, heat-resistant, and free from surface defects.

(e) *Leveling device.* Leveling device or guide, for proper adjustment of the liquid level in the cup (Fig. 3). This shall be made of No. 18-gage polished aluminum, with a projection for adjusting the liquid level when the sample is added to exactly  $\frac{1}{8}$ -inch below the level of the edge or rim of the cup.

(f) "Micro," or small gas burner of suitable dimensions for heating the bath. A screw clamp may be used to help regulate the gas. A small electric heater may be used.

(g) Ignition taper, which is a small straight, blow-pipe type gas burner. The test flame torch prescribed in the method of test for flash and fire points by Cleveland Open Cup (ASTM designation: D 92) is satisfactory.

(h) Alternative methods for maintaining the ignition taper in a fixed horizontal plane above the liquid may be used, as follows:

(1) Guide wire,  $3/32$ -inch in diameter and  $3\frac{1}{2}$  inches in length, with a right-angle bend  $\frac{1}{2}$ -inch from each end. This wire is placed snugly in holes drilled in the rim of the bath, so that the guide wire is  $\frac{1}{8}$ -inch from the center of the cup and resting on the rim of the cup.

(2) Swivel-type taper holder, such as is used in ASTM METHOD D 92. The height and position of the taper are fixed by adjusting the holder on a suitable ringstand support adjacent to the flash cup.

(i) Draft shield, consisting of two rectangular sheets of noncombustible material, 24 inches x 28 inches, are fastened together along the 28-inch side, preferably by hinges. A triangular sheet, 24 inches x 24 inches x 34 inches is fastened by hinges to one of the lateral sheets (to form a top when shield is open). The interior of the draft shield shall be painted a flat black.

#### PROCEDURE

4. (a) Place the tester on a solid table free of vibration, in a

location free of perceptible draft, and in a dim light.

(b) Run water, brine, or water-glycol solution into the bath to a predetermined level, which will fill the bath to  $\frac{1}{8}$ -inch below the top when the cup is in place. An overflow is permissible for water-level control.

(c) Firmly support the thermometer vertically halfway between the center and edge of the cup on a diameter at right angles to the guide wire, or on a diameter passing through the center of the cup and the pivot of the taper. Place so that the bottom of the bulb is  $\frac{1}{4}$ -inch from the inner bottom surface of the cup. If the old Tagliabue thermometer is used, immerse well to cover the mercury bulb, but not the wide body of the thermometer.

(d) Fill the glass cup with the sample liquid to a depth just  $\frac{1}{8}$ -inch below the edge, as determined by the leveling device.

(e) Place the guide wire or swivel device in position, and set the draft shield around the tester so that the sides form right angles with each other and the tester is well toward the back of the shield.

(f) If a guide wire is used, the taper, when passed, should rest lightly on the wire, with the end of the jet burner just clear of the edge of the guide wire. If the swivel type holder is used, the horizontal and vertical positions of the jet are so adjusted that the jet passes on the circumference of a circle, having a radius of at least 6 inches, across the center of the cup at right angles to the diameter passing through the thermometer, and in a plane  $\frac{1}{8}$ -inch above the upper edge of the cup. The taper should be kept in the "off" position, at one end or the other of the swing, except when the flame is applied.

(g) Light the ignition flame and adjust it to form a flame of spherical form matching in size the  $5/32$ -inch sphere on the apparatus.

(h) Adjust heater source under bath so that the temperature of the sample increases at a rate of  $2 \pm 0.5^{\circ}$  F. per minute. With viscous materials this rate of heating cannot always be obtained.

#### INITIAL TEST

5. Determine an approximate flashpoint by passing the taper flame across the sample at intervals of  $2^{\circ}$  F. Each pass must be in one direction only. The time required to pass the ignition flame across the surface of the sample should be 1 second. Remove bubbles from the surface of the sample liquid before starting a determination. Meticulous attention to all details relating to the taper, size of taper flame, and rate of passing the taper is necessary for good results. When determining the flashpoint of viscous liquids and those liquids that tend to form a film of polymer, etc., on the surface, the surface

film should be disturbed mechanically each time before the taper flame is passed.

#### RECORDED TESTS

6. Repeat the procedure by cooling a fresh portion of the sample, the glass cup, the bath solution, and the thermometer at least  $20^{\circ}$  F. below the approximate flashpoint. Resume heating, and pass the taper flame across the sample at two intervals of  $5^{\circ}$  F. and then at intervals of  $2^{\circ}$  F. until the flashpoint occurs.

#### REPORTING DATA

7. The average of not less than three recorded tests, other than the initial test, shall be used in determining the flashpoint and flammability of the substance.

#### STANDARDIZATION

8. (a) Make determinations in triplicate on the flashpoint of standard paraxylene and of standard isopropyl alcohol which meet the following specifications:

(i) *Specifications for p-xylene, flashpoint check grade.* p-Xylene shall conform to the following requirements:  
Specific gravity:  $15.56^{\circ}$  C./ $15.56^{\circ}$  C., 0.860 minimum, 0.866 maximum.  
Boiling range:  $2^{\circ}$  C. maximum from start to dry point when tested in accordance with the method of test for distillation of industrial aromatic hydrocarbons (ASTM designation: D 850), or the method of test for distillation range of lacquer solvents and diluents (ASTM designation: D 1078). The range shall include the boiling point of pure p-xylene, which is  $138.35^{\circ}$  C. ( $281.03^{\circ}$  F.).

Purity: 95 percent minimum, calculated in accordance with the method of test for determination of purity from freezing points of high-purity compounds (ASTM designation: D 1016), from the experimentally determined freezing point, measured by the method of test for measurement of freezing points of high-purity compounds for evaluation of purity (ASTM designation: D 1015).

(ii) *Specifications for isopropanol, flashpoint check grade.* Isopropanol shall conform to the following requirements:

Specific gravity: 0.8175 to 0.8185 at  $20^{\circ}$  C./ $20^{\circ}$  C. as determined by means of a calibrated pycnometer. Distillation range: Shall entirely distill within a  $1.0^{\circ}$  C. range which shall include the temperature  $80.4^{\circ}$  C. as determined by ASTM method D 1078.

Average these values for each compound. If the difference between the values for these two compounds is less than  $15^{\circ}$  F. ( $8.5^{\circ}$  C.) or more than  $27^{\circ}$  F. ( $16^{\circ}$  C.), repeat the determinations or obtain fresh standards.

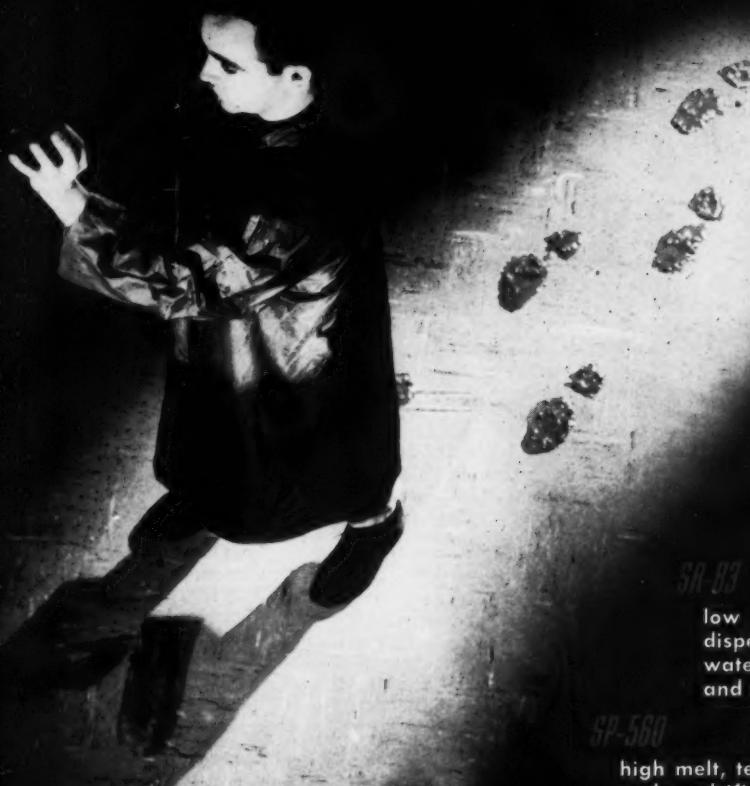
(b) Calculate a correction factor as follows:

# Schenectady Resins

*provide Excellent*

# **SOIL RESISTANCE**

*in emulsion polishes*



SR-83

low cost, alkali-soluble resin for ammonia-cut dispersions. Extremely light color. Contributes water-spot resistance, leveling, gloss, hardness and durability to dry-bright or buffable polishes.

SP-560

high melt, terpene-phenol resin compatible with waxes and emulsifiable polymers. Adds water resistance, gloss, clarity, toughness and stability to no-rub and buffable polishes.

SP-561

low cost, low melt (140F) fusion of SP-560 and oleic acid. For steam-jacketed kettles. Same performance as SP-560.

## *HAVE YOU EVALUATED THEM?*

Emulsion polish test sheets as well as a complete data book on these Schenectady Resins, their characteristics, suggested formulations and polish performance are readily available. Write for a copy of the bulletin and a free supply of the test sheets.

Resins and Varnishes — Since 1906



**SCHENECTADY**  
VARNISH COMPANY, INC.

SCHENECTADY 1, NEW YORK

Other Plants in Canada • England • France • Mexico

$$X = 92 - A$$

$$Y = 71 - B$$

$$\text{Correction} = \frac{X + Y}{2}$$

Where:

A = Observed flash of *p*-xylene, and  
 B = Observed flash of isopropyl alcohol.

Apply this correction to all determinations. Half units in correction shall be discarded.

#### PRECISION

9. (a) For hydrocarbon solvents having flashpoints between 60° F. and 110° F., repeatability is  $\pm 2^\circ$  F. and the reproducibility is  $\pm 5^\circ$  F.

(b) If results from two tests differ by more than 10° F., they shall be considered uncertain and should be checked. The calibration procedure provided in this method will cancel out the effect of barometric pressure if calibration and tests are run at the same pressure. Data supporting the precision are given in Appendix III of the 1956 Report of Committee D-1 on Paint, Varnish, Lacquers and Related Products, Proceedings, Am. Soc. Testing Mats., Vol. 56 (1956).

#### § 191.14 Method for determining extremely flammable and flammable solids.

(a) *Preparation of sample*—  
 (1) *Granules, powders, and pastes*. Pack the sample into a flat rectangular metal boat with inner dimensions 6 inches long x 1 inch wide x one-fourth inch deep.

(2) *Rigid and pliable solids*. Measure the dimensions of the sample and support it by means of metal ringstands, clamps, rings, or other suitable devices as needed, so that the major axis is oriented horizontally and the maximum surface is freely exposed to the atmosphere.

(b) *Procedure*. Place the prepared sample in a draft-free area that can be ventilated and cleared after each test. The temperature of the sample at the time of testing shall be between 68° F. and 86° F. Hold a burning paraffin candle whose diameter is at least 1 inch, so that the flame is in contact with the surface of the sample at the end of the major axis for 5 seconds or until the sample ignites, whichever is less. Remove the candle. By means of a stopwatch, determine the time of combustion with self-sustained flame. Do not exceed 60 seconds. Extinguish flame with a CO<sub>2</sub> or similar nondestructive type extinguisher. Measure the dimensions of the burnt area and calculate the rate of burning along the major axis of the sample.

#### § 191.15 Method for determining extremely flammable and flammable contents of self-pressurized containers.

(a) *Equipment required*. The test equipment consists of a base 8

inches wide, 2 feet long, marked in 6-inch intervals. A rule 2 feet long and marked in inches is supported horizontally on the side of the base and about 6 inches above it. A paraffin candle 1 inch or more in diameter, and of such height that the top third of the flame is at the height of the horizontal rule, is placed at the zero point in the base.

(b) *Procedure*. The test is conducted in a draft-free area that can be ventilated and cleared after each test. Place the self-pressurized container at a distance of 6 inches from the flame source. Spray for periods of 15 seconds to 20 seconds (one observer noting the extension of the flame and the other operating the container) through the top third of the flame and at a right angle to the flame. The height of the flame should be approximately 2 inches. Take three readings for each test, and average. As a precaution do not spray large quantities in a small, confined space. Free space of previously discharged material.

#### § 191.16 Method for determining flashpoint of extremely flammable contents of self-pressurized containers.

The apparatus used is the Tagliabue Open-Cup Flashpoint Apparatus as described in § 191.13. Some means such as dry ice in an open container is used to chill the pressurized container. The container, the flash cup, and the bath solution of the apparatus (brine or glycol may be used) are chilled to a temperature of about 25° F. below zero. The chilled container is punctured to exhaust the propellant. The chilled formulation is transferred to the test apparatus and tested in accordance with the method described in § 191.13.

#### EXEMPTIONS

##### § 191.61 Exemptions for food, drugs, cosmetics, and fuels.

(a) *Food, drugs, and cosmetics*. Substances subject to the Federal Food, Drug, and Cosmetic Act are exempted by section 2(f)(2) of the act; but where a food, drug, or cosmetic offers a substantial risk of injury or illness from any handling or use that is customary or usual it may be regarded as misbranded under the Federal Food, Drug, and Cosmetic Act because its label fails to reveal material facts with respect to consequences that may result from use of the article (21 U.S.C. 321(n)) when its label fails to bear information to alert the householder to this hazard.

(b) *Fuels*. A substance intended to be used as a fuel is exempt from the requirements of the act when in containers that are intended to be or are installed as part of the heating, cooling, or refrigeration system of a house. A portable container used for delivery or temporary or additional storage, and containing a substance that is a hazardous substance

as defined in section 2(f) of the act, is not exempt from the labeling prescribed in section 2(p) of the act, even though it contains a fuel to be used in the heating, cooking, or refrigeration system of a house.

#### § 191.62 Exemption from full labeling requirements.

(a) Any person who believes a particular hazardous substance in a container intended or suitable for household use should be exempted from full label compliance otherwise applicable under this act, because of the size of the package or because of the minor hazard presented by the substance, or for other good and sufficient reason, may submit to the Commissioner a request for exemption under section 3(c) of the act, presenting facts in support of the view that full compliance is impracticable or is not necessary for the protection of the public health. The Commissioner shall determine on the basis of the facts submitted and all other available information whether the requested exemption is consistent with adequate protection of the public health and safety. If he so finds, he shall detail the exemption granted and the reasons therefor by appropriate order published in the **FEDERAL REGISTER**.

(b) The Commissioner may, on his own initiative, determine on the basis of facts available to him that a particular hazardous substance in a container intended or suitable for household use should be exempted from full labeling compliance otherwise applicable under this act because of the size of the package, or because of the minor hazard presented by the substance, or for other good and sufficient reason. If he so finds, he shall detail the exemption granted and the reasons therefor by appropriate order in the **FEDERAL REGISTER**.

#### § 191.63 Exemptions for small packages, minor hazards, and special circumstances.

The following exemptions are granted for the labeling of hazardous substances in containers suitable or intended for household use under the provisions of § 191.62(b):

(a) When the sole hazard from a substance in a self-pressurized container is that it generates pressure, the name of the component which contributes the hazard need not be stated.

(b) Common matches, including book matches, wooden matches, and so-called "safety" matches are exempted from the labeling requirements of section 2(p)(1) of the act insofar as they apply to the product, being considered hazardous because of being "flammable" or "highly flammable" as defined in § 191.1(k).

(c) Paper items such as newspapers, wrapping papers, toilet and cleansing tissues, and paper writing supplies are exempted from the labeling requirements of section 2(p)(1).

of the act insofar as they apply to the products being considered hazardous because of being "flammable" or "extremely flammable" as defined in § 191.1 (k).

(d) Thread, string, twine, rope, cord, and similar materials are exempted from the labeling requirements of section 2(p)(1) of the act insofar as they apply to the products being considered hazardous because of being "flammable" or "extremely flammable" as defined in § 191.1 (k).

(To be Concluded)

### Clarkson Emulsifiers

Emulsifiable ortho-dichlorobenzene is widely used to eliminate odors from garbage dumps; sewage and other plants. Its uses depend upon low concentrations in water. "Clarco Emulsifiers 11 and 12," produced by Clarkson Laboratories, Inc., Camden, N. J., are said to be low cost, liquid concentrates specifically formulated to make ortho-dichlorobenzene self-emulsifiable in water. "Clarco Emulsifier No. 11" is used when water hardness is below 10 grains per gallon, and "Emulsifier No. 12" is recommended when water hardness is above 10 grains per gallon.

—★—

### Hercules Names Givens

Kenneth T. Givens has been appointed assistant sales manager of pesticides in the Agricultural Chemicals Division of Hercules Powder Co., Wilmington, Del., it was announced recently. Mr. Givens, formerly senior technical sales-service representative for the division in Brownsville, Tex., will be stationed at the home office in Wilmington.

### Local Advertising

(From Page 60)

do a thorough market and media research job, and expect our agency to furnish us with detailed media recommendations regarding its needs. Finally, we put together a comprehensive plan, including a timetable, for the development of the new market—selecting a product (or products) which market research indicates has the best chance to achieve satisfactory initial sales.

Usually, in a new market, we like to use the sort of advertising that provides the strongest merchandising values for we believe strong merchandising values are a primary requisite in the development of distribution. Again, let me emphasize the fact that success or failure in new market introductions will depend largely upon the effectiveness of prior planning.

### Launching New Products

As far as new product introductions are concerned, we believe we have gained some solid knowledge in this field during the past five years, largely because our life depended on it. For the introduction of a new product in a market, we create a special advertising budget, generally based on a cost-per-thousand-families allocation. When we go into a market with a new product, we use not only the newly established budget for the new product, but we also support the introduction with some portion of the schedules on existing products, and we continue this for a period of four to six weeks. This provides a maximum of advertising support during the critical initial stages.

Following the initial period, we revert to regular schedules on all products, but we stand ready to provide extra support if needed. We have found that the first year in the life of a new product in individual markets is the critical year and the flexibility of local advertising is extremely important to us during this period.

### Conclusion

In conclusion, it is not my purpose to beat the drum for local advertising. Local advertising requires a tremendous amount of detailed planning and follow-up. Certainly the use of national media has many appeals both to ourselves and our agency, including the simplicity and ease with which a few national campaigns can be administered in compari-

son with the unbelievable complexity of conducting some 150 individual campaigns for each product in markets ranging from northern Maine to southern California. The major use of national advertising is under constant consideration and scrutiny by us, and should good opportunities arise, say, in network television, it is quite possible that a considerable part of our local funds would be diverted to national media. However, we are quite satisfied with the performance of local media at this time, and we are more than attracted to its flexibility for our present requirements.

I could not conclude this talk without stating that we are extremely sensitive to the needs and desires of all of our grocer distributors. We believe that the good relationships we enjoy with them are well known throughout the industry and we are gratified that we have been able to hold the interest and cooperation of all groups, chains, Co-ops, independents and wholesalers. Certainly, we try to match our advertising and merchandising strategy to theirs. We have not been able and we do not intend to try to force our products through our distributors to the consumer, willy-nilly. In the harsh competitive atmosphere in which we exist, our survival and continued growth depend upon our ability to develop and merchandise programs which are attractive and acceptable to all segments of the trade. Again, insofar as we are concerned, local advertising has been best able to serve this requirement. ■

### Automotive Specialties

(From Page 93)

resented in these outlets in the months ahead, you stand to lose a considerable volume of business. But, with fuller exposure to the consumer coupled with a planned new product program automotive specialties will achieve an improved rate of progress in the years ahead. ■

# Hospital Germicides

**Sharp increase in number of disinfectants for hospital use brings about enforcement problems for U. S. Agriculture Department**

By L. S. Stuart\* and L. F. Ortenzio,

Pesticides Regulation Branch  
Plant Pest Control Division  
U. S. Department of Agriculture  
Washington, D. C.

## Part II

**R**EGISTRATION records on April 15, 1958 revealed existing registrations of 435 different formulas with labels carrying specific recommendations for hospital applications. By April 15, 1961, the number of registrations in this category had increased to 709. There was a corresponding increase in the number of manufacturers soliciting hospital business from 203 to 404 during this time.

We have no way of determining whether these increases in the numbers of companies and products in the hospital germicide field paralleled similar increases in total germicide sales and consumption. However, they do indicate clearly that there has been increased interest in the use of chemical germicides by hospitals and that the competition for this segment of the germicide market has intensified.

The estimates listed in the total number of germicides used by hospitals and the total numbers on semi-log paper of companies selling such products were made by plotting cumulative totals for different products collected and different manufacturers after 50, 100, 150, 200, 250, and 292 hospital visits and extending the best fitting straight lines through the cumula-

tive total points to intercept the 6,845 log scale hospital line.

Admittedly, this represents a rather wild type of extrapolation, but it is noteworthy that the resulting figures for both products and companies fall between the total registration figures at the beginning and end of the period in which the data were collected. Thus, it appears that hospitals may actually be currently purchasing as many different products of this type from as many different manufacturers as is indicated by the Department's registration file. The procedure described for developing the estimates from the collec-

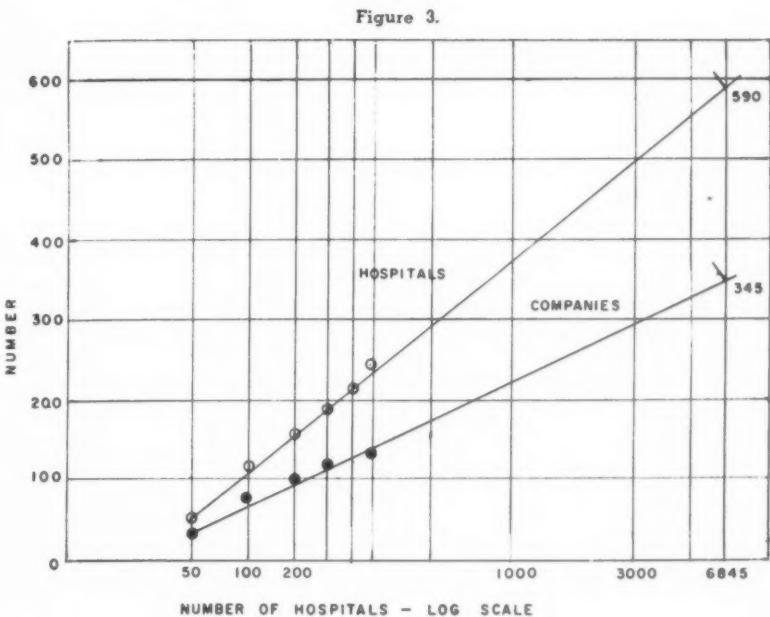
tion records is illustrated in Figure 3.

How germicide sales to hospitals are distributed among individual suppliers was of special interest to the Department since this had a direct bearing on the enforcement problem. The type of distribution encountered is illustrated in Table 3.

Table 3. Distribution of Hospital Germicides Business Among Individual Companies

Firms making products found in:	Number of firms
>45% Hospitals	0
>35% <45% of Hospitals	2
>25% <35% of Hospitals	2
>15% <25% of Hospitals	2
>5% <15% of Hospitals	2
>2.5% <5% of Hospitals	3
>1.0% <2.5% of Hospitals	10
>0.5% <1.0% of Hospitals	19
<0.5% of Hospitals	96

From the nature of the hospital germicide market as indicated in Table 2 and 3 it is clear that straight project sampling in hospitals results in the multiple sampling of disinfectants produced by eight companies, occasional sampling of germicides produced by 13 companies and widely spaced or infrequent sampling of products manufactured by 115 to more than 300 companies. It is hard to solve the problem of intercepting ship-

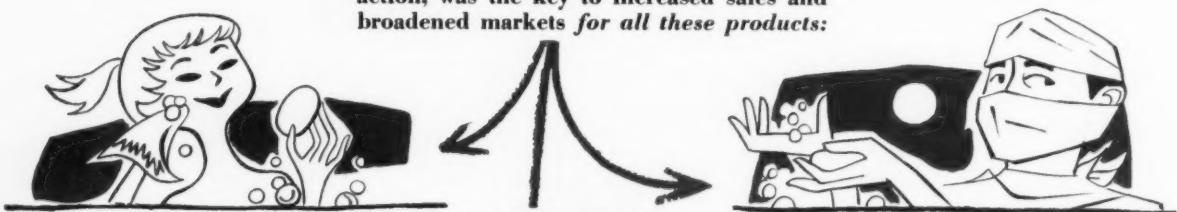


\*Paper presented at 47th midyear meeting, Chemical Specialties Manufacturers Association, Chicago, May 16, 1961.

# G-11®

## (HEXACHLOROPHENE U.S.P.)

with its unique degerming and antiseptic action, was the key to increased sales and broadened markets for all these products:

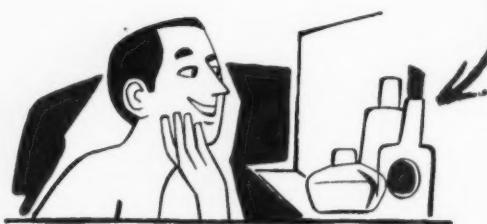


Waterless Hand Cleaners  
Detergents  
Shampoos



Deodorant  
Antiseptic  
Surgical Scrub  
Medicated

### SOAPS



### COSMETICS

Deodorant Creams  
Deodorant Sticks  
Deodorant Colognes  
Deodorant Powder  
Anti-perspirants  
Baby Lotions  
Baby Powders  
Hand Lotions  
Face Creams  
Shampoos



Skin Conditioners  
Dusting Powders  
Hair Dressings  
Antiseptic Creams  
Aftershave Lotions

### PHARMACEUTICALS

Antiseptic Ointments  
Diaper Rash Preparations  
Instrument Sterilization  
Bandages  
Surgical Dressings  
Vaginal Preparations  
Antipruritics  
Protective Hand Creams  
Corn Ointments



Acne Lotions  
Menthol Lotions and Ointments  
Anti-infectives  
Surgical Rubber Goods  
Lip Pomades  
Aerosol Foot Sprays

Perhaps G-11 is exactly what *your* product needs to give it a competitive advantage in your markets. Sindar invites you to phone, wire or write for full information.

**SINDAR® Corporation**  
Industrial Aromatics and Chemicals  
321 West 44th Street, New York 36, N. Y.

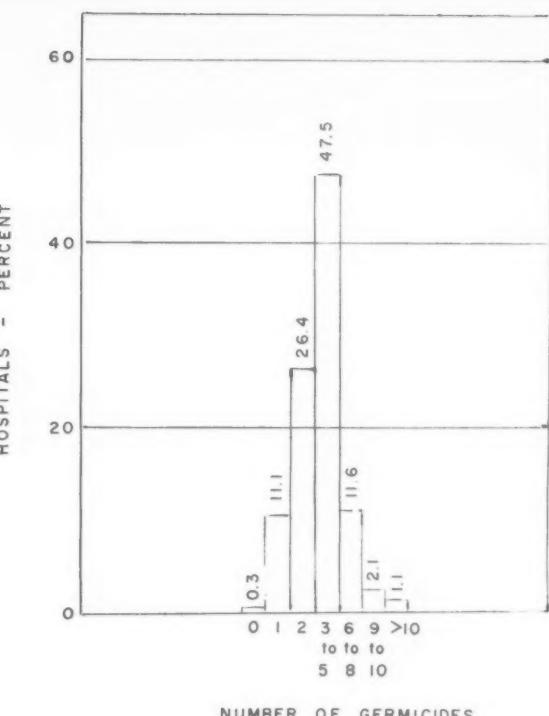
ments and sampling products where many companies sell only a few outlets in a multiple outlet market covering a wide area.

Figures on the status under the Federal law of the various disinfectants found in hospitals and their effectiveness, used as directed, are given in Table 4.

The information in Table 4 reveals that 9.8 per cent of the samples collected were of intrastate origin and therefore not subject to the provisions of the Federal Insecticide, Fungicide and Rodenticide Act. A.O.A.C. Use-Dilution Tests showed 64.5 per cent of these to be ineffective, used as directed, against both *S. choleraesuis* and *S. aureus*. This very high incidence of ineffectiveness may be attributed to a variety of factors. Some hospitals, for instance, still insist on the use of certain mercurials for disinfecting specific items, although such applications have long been known to be ineffective against Staphylococci and are not accepted for registration under the Federal law for application in hospitals. Such products are commonly obtained through local drug houses under labels which do not identify them as economic poisons. Also, the purchase of locally produced pine oil disinfectants accounted for a substantial part of this figure.

Among germicides subject to Federal regulation, 19.6 per cent were found ineffective when used as directed. This figure can hardly

Figure 4.



be called satisfactory. A breakdown of compliance among products subject to Federal regulation is shown in Table 5.

According to Table 5, 24.6 per cent of the interstate regulated products sampled in hospitals failed to comply with the provisions of the Federal law on one or more counts. Of the total number of samples collected, 19.6 per cent were ineffective against *S. aureus* or *S. choleraesuis* or both organisms; 3.5 per cent of the total had not been registered; and in 5.2 per cent of the cases chemical deficiencies were found. Actually, the 5.2 per cent figure shown here for chemical deficiencies may be much too low. In this particular investigation complete chemical analyses were not made of those samples, which were found to be effective in an initial screening test.

The 7.7 per cent figure involving claims and representations differing in substance from claims and representations made in connection with registration deserves special comment. This type of violation is one of the most diffi-

cult with which the Department has to contend. In most instances unregistered collateral advertising is involved. Use of excessive claims and representations through such media may break down entirely the effectiveness of a basically sound registration program for any one class of products. In the field of hospital germicides, this practice has reached a level which may require either an amendment to the law to provide for heavier penalties for this type of violation

Table 5. Compliance with Provisions of Federal Law for Hospital Disinfectants Shipped in Interstate Commerce.

Hospital Germicides	Percent
In compliance with all requirements	75.4
Not in compliance with requirements	24.6
(a) Ineffective used as directed	19.6
(b) Chemically deficient	5.2
(c) Use of label claims differing in substance from those made in connection with registration	7.7
(d) Non-registration	3.5
Total	100.0

Table 4. Status and Effectiveness under the Federal Insecticide, Fungicide and Rodenticide Act of Disinfectant Shipments Sampled in Hospitals.

Germicide samples collected	Percentages
Interstate in origin:	90.2
Effective, used as directed	80.4
Ineffective, used as directed	19.6
Total	100.0
Intrastate in origin:	9.8
Effective, used as directed	35.5
Ineffective, used as directed	64.5
Total	100.0

The wide range of physical properties now available in Eastman's Epolene series of low-molecular-weight polyethylene resins provides formulating flexibility never before possible. For with the addition of three new resins (Epolene LVE, HDE and HD), polish makers can choose now from among seven different types to improve existing formulations or to develop new products.

Epolene resins produce self-polishing floor polishes that exhibit high gloss, anti-slip, water-spotting resistance and rebuffability. Emulsions of up to 40% solids can be prepared. Properly formulated, polishes made from Epolene are low in color and do not darken or turn yellow. Neither do they build up color with repeated applications.

Choose from either emulsifiable or non-emulsifiable types to obtain the right formulating characteristics and performance properties for your equipment and service.

**Epolene E emulsifiable** • Epolene E produces water-emulsion floor polishes that exhibit an excellent balance of high gloss, hardness, durability and good resistance to water-spotting, scuff and dirt pick-up. Ideally suited for heavy traffic, polishes made from Epolene E exhibit extreme toughness due to its higher molecular weight.

**Epolene LVE emulsifiable** • Lower in melt viscosity than the other emulsifiable Epolene resins, Epolene LVE has somewhat better handling characteristics and is the easiest to emulsify. It is softer than other resins in the series, too, and therefore may be expected to contribute better anti-slip properties and rebuffability to floor polishes made from it.

**Epolene HDE emulsifiable** • The first high-density emulsifiable polyethylene available, Epolene HDE is much harder than other resins in the series, yet quite easy to handle. A film of unmodified Epolene HDE emulsion is almost as hard as a film from a finished floor-wax formulation (rebuffable type). This increased hardness is due not only to the nature of this high-density polyethylene, but also to the fact that it is more compatible with oleic acid than are other emulsifiable polyethylenes. Epolene HDE restores rebuffability to polymer-containing polish formulations without sacrificing hardness.

**Epolene N non-emulsifiable** • Epolene N can improve significantly the properties of paraffin, microcrystalline or other waxes and is easily blended with these materials. It can replace part or all of the hard waxes in solvent paste polishes, for example, automotive polishes. Such polishes are characterized by low color, excellent hardness and gloss, and remarkable durability.

**Epolene LV non-emulsifiable** • Epolene LV and Epolene N are useful in similar applications. The LV type is softer than Epolene N, however, and because of its lower melt viscosity is somewhat easier to handle.

**Epolene HD non-emulsifiable** • An extremely hard material, Epolene HD is nevertheless easy to handle because of its low melt viscosity. It has a high softening point, and may be blended with waxes to increase their melting points. Epolene HD has a higher density than the other non-emulsifiable polyethylenes in the series.

**Epolene C non-emulsifiable** • Higher in molecular weight (7000) but lowest in density (0.907) of all the Epolene resins, Epolene C may be used in modifying waxes to increase melting points or to improve toughness and gloss.

## Eastman now offers polish formulators 7 basic types of polyethylene

New Epolene resins  
enable you to formulate  
broader range of  
liquid and paste polishes

Type	Molecular Weight	Brookfield Viscosity (cps. @ 120°C.)	Density	Penetration Hardness (100g./5sec./77°F., 10ths of mm.)
Epolene E	2500	1500	0.938	2
Epolene HDE	1500	455	0.956	1
Epolene LVE	1500	400	0.939	5
Epolene N	2500	2500	0.928	1
Epolene HD	1500	340	0.938	0.5
Epolene LV	1500	360	0.925	3
Epolene C	7000	16,000	0.907	7

If you are using low-molecular-weight polyethylenes in your polishes, investigate the complete Epolene series. Your Eastman representative will gladly explain the advantages of each of the resins in the series and will show you how to realize the most profitable use of them in your formulations. Ask him for specific formulating assistance and about the new time-saving, cost-cutting emulsifying technique developed at our laboratories.

# Epolene®

EASTMAN low-molecular-weight polyethylene resins

**SALES OFFICES:** Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Chicago; Cincinnati; Cleveland; Detroit; Framingham, Massachusetts; Greensboro, North Carolina; Houston; New York; Philadelphia; St. Louis. **West Coast:** Wilson and Geo. Meyer & Company, San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

and/or revision of existing registration policies to require certain disclaimers on the label itself.

The Department has assigned during the past three years to this class of products a disproportionate amount of the available enforcement facilities. Yet no improvement has been observed in the overall compliance picture and this is most discouraging.

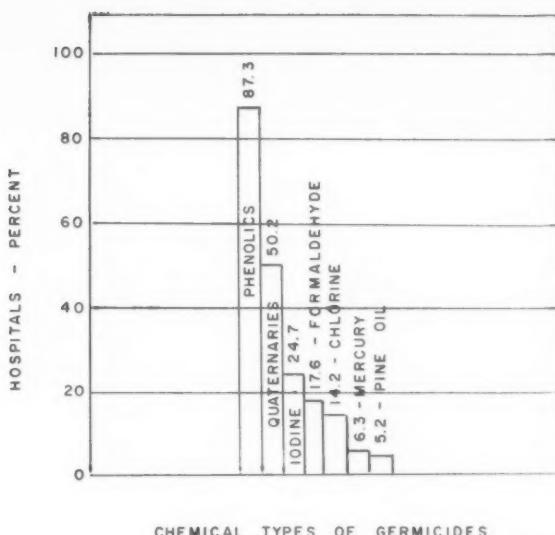
Some data were gathered on current hospital use patterns with respect to numbers and chemical types of disinfectants. An analysis of the number of different germicidal chemicals found in use in individual hospitals is presented in Figure 4.

Three to five germicidal products are employed in 47.5 per cent of the hospitals, according to Fig. 4. Some 26.4 per cent of the hospitals depended upon two germicides and 11.1 per cent on one product. A similar percentage (11.6 per cent) use six to eight products, 2.1 per cent nine to 10; and 1.1 per cent more than 10 products.

The 0.3 per cent using no germicide represents one hospital. Just how significant this figure may be, we do not know. However, when our investigator visited this hospital the personnel lectured him on the evils of germicidal chemicals and the bactericidal benefits of soap and water, which indicates that the figure may have considerable significance. It may well be that there are as many as 21 hospitals in the United States not using any germicidal chemicals, depending solely upon soap and water cleaning, heat sterilization and hot water disinfection.

From a bacteriological standpoint, the acceptability of such a program would depend largely upon the availability of 180° water throughout the hospital. Also, it might be expected that cleaning with alkaline soaps in water at elevated temperatures would provide some measure of control insofar as gram negative organisms are concerned. On the other hand, *Staphylococci* — which survive in

Figure 5.



large numbers during drying as opposed to gram negative enteric bacteria — are quite resistant to alkaline soap solutions. Elimination or substantial reductions of such organisms could not be expected in any normal soap and water cleaning of floors, building fixtures and hospital equipment. Use rates of germicides according to chemical types are shown in Figure 5.

Phenolic formulations were found in 87.3 per cent of the hospitals visited; quaternaries in 50.2 per cent. Iodine formulations were being used in 24.7 per cent, formaldehyde preparations in 17.6 per cent, chlorine preparations in 14.2 per cent, mercury derivatives in 6.3 per cent and pine oil preparations in 5.2 per cent of these hospitals. It is surprising that the figure for the relatively cheap and readily available chlorine germi-

cides was found to be so low. It is equally surprising that the figures for mercury preparations and pine oil disinfectants were of the magnitude shown.

Some idea of the germicide use patterns encountered in various hospitals employing germicides of different chemical types can be obtained from the percentage figures given in Table 6.

Of the hospitals relying on one product 86 per cent used a phenolic formulation and 14 per cent used an iodine preparation. No hospital in this group used a quaternary, formaldehyde, chlorine, mercury or pine oil.

Where two products were used, a rather wide variety of combinations were encountered. A listing in the order of frequency at which they were encountered can be given as phenolic-quaternary, 30 per cent; phenolic-phenolic, 28.6

Table 6. Occurrence of Disinfectants of Different Chemical Types in Hospitals Using Varying Numbers of Products

Number of Germicides Used	Percent of Hospitals Using:						
	Phenolic	Quaternary	Iodine	Formaldehyde	Chlorine	M Mercury	Pine Oil
0	0	0	0	0	0	0	0
1	86	0	14	0	0	0	0
2	87	44	24	10	3	2	2
3-5	89	54	24	15	13	4	5
6-8	91	75	25	16	16	4	9
9-10	100	100	40	80	35	20	41
>10	100	100	100	100	100	100	100

**BEST  
SELLERS**  
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per cent; phenolic-iodine, 13.6 per cent; quaternary-iodine, 9.1 per cent; phenolic-formaldehyde, 6.7 per cent; phenolic-chlorine, 3.5 per cent; quaternary-formaldehyde, 3.0 per cent; phenol-pine oil, 2.5 per cent; phenol-mercury, 1.5 per cent; and quaternary-pine oil, 1.4 per cent.

These figures demonstrate that the majority of the hospitals in this two-products group preferred two chemical types. The hospitals using phenolic-phenolic combinations were usually employing a straight disinfecting formula and a germicidal-detergent formula. The apparent preference for germicides of two chemical types might suggest that hospital personnel — because of past experience with antibiotics — are attempting to guard against the development of strains resistant to contact germicides of specific chemical types. As a follow-up on this possibility, figures were developed on the frequency with which 1, 2, 3, 4, 5, and  $>5$  chemical types were found in the large group of hospitals using 2 to 8 products. The data thus developed are presented in Figure 6.

This information clearly

reveals a high degree of preference for two or three chemical types. It should be made a matter of record, however, that hospitals were found using as many as six different phenolic formulations and four quaternary formulations.

Information on applications of germicides within the different hospital areas and selections according to chemical types was not obtained from many of the hospitals visited. Thus, the figures which have been developed along this line are less reliable indices of the overall situation than those presented up to this point.

#### Instrument Disinfection

Instrument germicide use was reported by only 167 hospitals. At this point it should be pointed out that use of ethyl and isopropyl alcohol for this use is not reported here. It must be assumed that in nearly all hospitals supplies of one or both of these germicidal chemicals are available for use on instruments. Personnel interviewed by Department investigators were either well indoctrinated on the value of these chemicals as thermometer or instrument germicides or were completely un-

familiar with this application even though evidence suggested that they were in fact available and in use.

Of the 167 hospitals where samples of special instrument germicides were collected or reported in use, 59 or 35 per cent were employing formaldehyde formulations, 134 or 80 per cent were using quaternaries, 46 or 27 per cent were using phenolics, 13 or eight per cent were using mercury preparations and eight hospitals or five per cent were using iodine formulations. None of the 292 hospitals visited substituted chemical disinfectants for heat sterilization of surgical instruments except where the instruments were of a type which could not be heat sterilized. Germicide applications commonly reported were for thermometers, heat sensitive items and so-called sterile storage.

#### Disinfection of Floors

Routines within the surgical, obstetrical and nursery areas in some hospitals were described in considerable detail. Emphasis was usually placed on such factors as wet mopping of floors once or twice daily, restrictions on the use of mops and pails in these departments, use of special shoes and stockings and the exclusion of street shoes and street clothing. While such information was recorded it was not requested, the primary objective of the survey being to determine what products were used in specific applications. Strangely enough, the latter information was much more difficult to obtain. This may be due, in part, to lack of confidence in the products which had been purchased and were in use. Many disclaimers were encountered with respect to the use of given trade named disinfectants. Tentatively, one suspects the cause of this situation to be derogatory information on competitors' products dispensed by sales personnel. In nine different instances where hospital personnel explained in great detail that they did not use

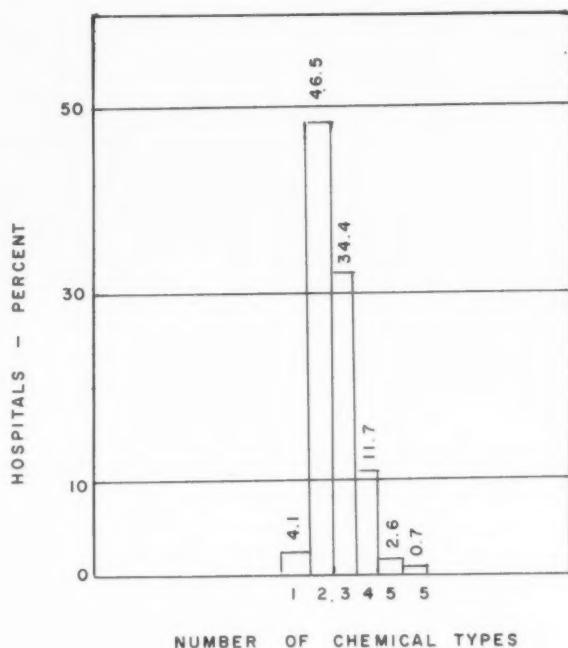


Figure 6.



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Brand X for anything, the products in use were found deficient, whereas information available to the Department indicated that Brand X was a reasonably effective product.

A comparison of floor disinfection within the surgical, obstetrical and nursery areas with methods used on floors in corridors and the medical wards and rooms emphasizes the apparent uncertainties in the staffs' minds regarding suitability of products of different chemical types, specific products of the same chemical type and routines necessary to obtain the measure of control desired. Common floor routines practiced in the various areas included wet mopping of the operating room floor after each operation, wet mopping of surgical room and corridor floors twice a day, wet mopping of the nursery floor once a day and wet mopping of corridor, medical room and medical ward floors three times a week with some selected disinfectant. In over 80 per cent of these cases different products were selected for different areas, but no consistent pattern can be found in these selections and the factors prompting the selections encountered do not seem to be directly related to bacteriological requirements. No formaldehyde or mercury type products were reported in use on floors. Phenols were applied to floors in 79 per cent of the hospitals reporting, pine oil in 17 per cent, iodine in 20 per cent, chlorine type products in two per cent and quaternaries in 11 per cent of the cases. Certain hospitals used iodine products exclusively for floors within the operating room and surgical areas and phenolic preparations exclusively for wards, patients' rooms and corridor floors. Other hospitals followed the reverse procedure and were equally sure that their selection was necessary and correct. Some hospitals employed different brands of phenolic preparations for different areas. Yet, in many instances careful study of the reg-

istered labels would have revealed that the different brands had almost identical compositions and should have been equal in efficacy.

Quaternaries were more commonly assigned to floors in surgical areas than to corridors or medical room floors. The reason for this selection is not entirely clear. Pine oil disinfectants were never reported in use on floors within the surgical area.

Among phenolics the straight disinfectant type products were more commonly encountered within the surgical areas than were detergent-germicide formulas. The latter appeared to be more popular in general housekeeping outside the surgical area. (3) The reason for this is not apparent.

It is difficult to believe that hospitals use surgical scrub soaps to wash floors but 7.6 per cent of the hospitals questioned on floor practices reported doing just that. If used at a concentration which would have any practical value in this application the cost would be prohibitive. If used at the concentrations reported no practical antibacterial benefits could be anticipated. Such products are not at present classified as economic poisons requiring registration with the Department. However, on the basis of critical applications to inanimate surfaces of the type reported above, it may be necessary to amend the regulations to bring them under the purview of the law.

#### **Laundry Germicides**

Information on use of germicidal chemicals in the hospital laundry was furnished in only a small number of cases. A high percentage of the hospitals visited send their laundry out to commercial establishments. Quaternaries, chlorine, phenolic formulas, and numerous bacteriostatic chemicals were all reported by hospitals operating their own laundries.

Chemicals to provide laundry and surfaces with residual antibacterial activities are being widely

promoted for hospital use. They are enjoying fairly wide acceptance, judged by the number of products of this class encountered by Department investigators. Problems related to the regulation of these chemicals have been discussed previously (8, 9). However, it should be emphasized here that the Department has found no chemically treated laundry or surface which can be depended upon to be self-sterilizing, germ-free or self-disinfecting for any hospital purpose. Thus, it would seem that dependence by hospitals on such materials and treatments as the sole means of preventing environmental cross-infection cannot be justified. *On the other hand, if hospital authorities do recognize that these treatments and materials cannot be accepted in replacement of proper cleaning routines, terminal sterilization and adequate terminal disinfection, arbitrary barriers against their sale and use in hospital sanitation programs cannot be erected.* The word "if" is used in the preceding sentence because many hospital authorities do not seem to recognize the differences between the potential practical values of bacteriostatic and bactericidal chemicals, or the relative measure of protection which can be expected from bacteriostatic treatments, sanitizing and disinfecting operations.

It is certainly conceivable that a floor routine for a corridor of one weekly wet mopping with an effective disinfectant, followed by the application of a bacteriostatic wax and daily dry-mopping with a bacteriostatic dust-control mop, might maintain a higher level of sanitation in the immediate environment than three widely spread wet moppings with a disinfectant and no other treatment whatsoever. This applies especially where control of dust-borne bacteria is a major consideration.

However, the use of bacteriostatic products in the terminal disinfection of a room after the discharge of a patient having an

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infectious disease could be expected to lead to serious consequences. Thus, the promoters of residual bacteriostatic products clearly have a responsibility of labeling the products in accordance with their limited values.

### Summary

A marked increase has been observed in the number of products offered to hospitals for use in environmental sanitation and infection control programs resulting from staphylococcal disease problem. The products carry labels claiming germicidal activity. Hospitals are purchasing such items in increasing numbers. However, uniform patterns as to procedures in selection, purchase and application of these products have not been observed.

Much uncertainty appears to exist within this area of hospital operations. There is a real need for the establishment or enforcement by official medical and professional hospital groups of some minimum performance requirements for germicides and disinfectants, recommended for application within the various routines considered important to the hospital sanitation program.

Regulation of germicides and disinfectants and bacteriostatic chemicals sold to hospitals is complicated by the presence in the market of a rather large number of companies shipping to a small number of outlets within a market of a very large number of outlets covering a very wide area. Compliance with legal requirements within this group of products is at a lower level than can be considered desirable. While policing action by the Department can and does correct violations of the law when they are encountered there is no evidence that the overall level of compliance can be significantly improved by the facilities presently available for this type of activity.

Continued interest in and market demand for materials of this type by hospitals will depend

in a large measure on the reliability of the products which they purchase and the development of rational application procedures within the various hospital areas. Thus, from the standpoint of enlightened self-interest, germicide manufacturers have a real stake in the development and promotion of hospital premise disinfecting procedures which can clearly be established as valuable in controlling cross infections and in the subsequent delivery of products which will be effective in these procedures.

### Hospitals Need Help

Hospital officials need help in selecting and purchasing products for applications in their various sanitation activities. The effectiveness of the specific procedure should be emphasized rather than the sale of a specific product.

Efficiency of the Government regulatory facilities available for policing products in this class can be improved from information gained in this study. However, magnitude of the job is such that no real improvement in the degree of compliance can be expected from these activities unless greater support can be obtained from official medical and hospital associations through the establishment of some minimum standards or unless a substantial increase in the facilities for conducting these activities is made available. ■

### Acknowledgment

Acknowledgment should be made of the activities of A. D. Cromartie, G. N. Downard, R. A. Gadapec, W. B. Tiedt, H. P. Ruhlman, S. Weiner, S. T. Colamaria, J. D. Poskin, M. C. Merryfield, A. J. Dellavechia, C. E. Holmen, and J. B. Corson in collecting and assisting in the analysis of the information obtained from hospitals.

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### Skinner Joins P & G

David L. Skinner has joined the research division of Procter & Gamble Co., Cincinnati, it was announced recently. Mr. Skinner recently completed graduate work at the University of Florida.

### New Air Pressure Packer

A new air pressure packer for powdery, flaky, granular or pelleted materials has just been introduced by H. L. Stoker Co., Claremont, Calif. The new "Stok-Aire" fills bags faster and more tightly than gravity filling systems, according to the manufacturer. The machine handles either valve or open mouth bags or drums.

In addition to speed, Stoker claims new weighing accuracy for the filler, which is said to eliminate need for check weighing. The unit features a true-scale 100 to 1 lever system that is electronically controlled by a non-sparking sensing capacitor. This capacitor is said to react to movements equivalent to a change of  $\frac{1}{4}$  ounce against a capacity of 500 pounds.

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**Waxed Floors Safe**

(From Page 82)

those of the wax coating, that is, they are more slippery unwaxed than waxed.

**Precautions in Waxing**

Mr. Conner has listed situations which have resulted in liability due to unsafe floors. To control such situations on waxed floors and thereby avoid being subjected to liability, I suggest:

1. Carry out all floor maintenance, including waxing, in accordance with the directions of the manufacturer of the product used.
2. Do not allow traffic over a freshly waxed floor until the wax is dry; or when a solvent type wax is used, until it is polished.
3. Wax the entire floor. Since the variation in properties is slight, this may seem to be an inconsequential precaution. However, for psychological reasons, it is preferable.
4. Use the right kind of wax for the floor involved. Follow the manufacturer's recommendations.
5. Do not wax ramps or stairs. (The reason is psychological rather than physical.)
6. Do not use heavily oiled mops on waxed floors. The oil mixed with the wax results in the formation of a semi-liquid film.
7. Do not wax outside walkway surfaces which are exposed to rain.

In addition, the control of the following situations is pertinent to all floors, whether waxed or not.

1. Keep floors clean and dry. Keep them free of all foreign matter. Provide a mat at entrances on rainy days.
2. Post warnings of any existing danger.
3. Keep floor areas well lighted.
4. Inspect all floor areas regularly and eliminate any conditions which are dangerous.

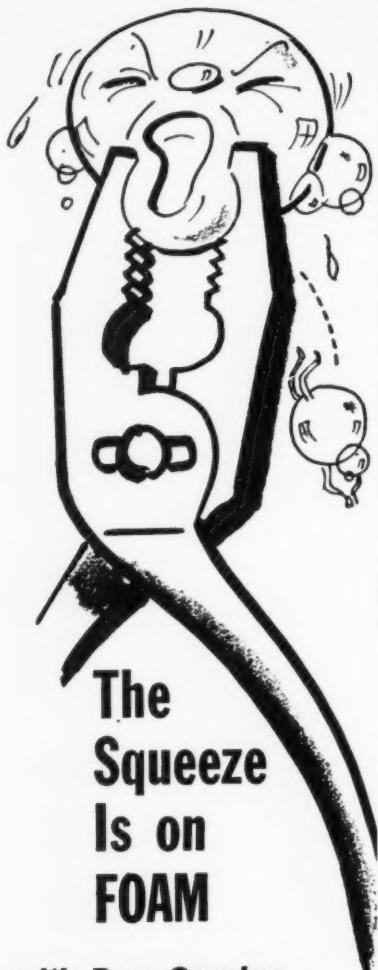
We have spent a good deal of time discussing the various points involved in the maintenance of a waxed floor which might contribute to slipping and falling. In so doing, we have limited ourselves to the duties which the owner or occupant of the premises should exercise in order to control the existence of a dangerous condition on his floors.

Until now we have not discussed the other major factor in slipping and falling accidents, the pedestrian. True, the pedestrian is not expected to anticipate the existence of a dangerous condition, but he must exercise reasonable care for his own safety. Many liability suits have been filed in which, in my opinion, the accident was entirely attributable to the pedestrian or in which he had at least contributed to it.

I believe that the most effective way that I can illustrate the carelessness of pedestrians and their contribution to slip accidents is to quote from a bulletin issued by the General Services Administration 10 years ago. GSA has been attempting for some time to reduce accidental falls in government buildings. The agency even went to the extreme of putting the government into the business of manufacturing wax. All to no avail. Finally GSA issued this statement.

"Our Safety and Fire Prevention Section has received several reports of accidental falls within buildings under our jurisdiction. Many of these accidents are reported to have been caused by waxed floors. An investigation of each of these incidents indicates that the cause, in the large majority of cases, was not the slipperiness factor, but carelessness on the part of the injured person.

"It is virtually impossible to maintain properly some types of floors within our buildings without waxing. This must be done not only as a matter of proper maintenance, but also for cleanliness and appearance. Our Engineering and Research Office is constantly testing waxed floors with a Sigler pendulum impact-type slipperiness tester, developed at the National Bureau of Standards, to assure



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their safety. This testing program determines the coefficient of friction which is an index of relative slipperiness. Our tests on recently waxed floors with this equipment show satisfactory anti-slip properties and do not indicate a high slipping hazard to exist.

"We believe that many of the accidents blamed on waxed floors are avoidable and that much of the difficulty can be eliminated by employees exercising greater caution while going about their daily duties. Accident statistics indicate that about 85% of our accidents are the result of unsafe acts. We would appreciate your assistance by the issuance of a brief instructive memorandum to your employees to help them in the prevention

of this type of accident. Listed for your convenience are a number of suggested causes and remedies:

1. Walk — don't run.
2. Face in the direction you are walking.
3. Be extra cautious on waxed floors.
4. Don't read while walking.
5. Keep to the right of the center in corridors.
6. Keep far to the right in turning corners, especially blind corners.
7. Enter corridors from offices, stairways and elevators with caution.
8. Don't crowd or push.
9. Avoid horseplay.
10. Wear practical type work shoe."

To summarize Part I of this paper we can say, "Waxed Floors Are Safe," but the owner or occupant can do things to them and the pedestrian can use them in such a way as to create a dangerous situation. ■

**Lithium Hypochlorite**

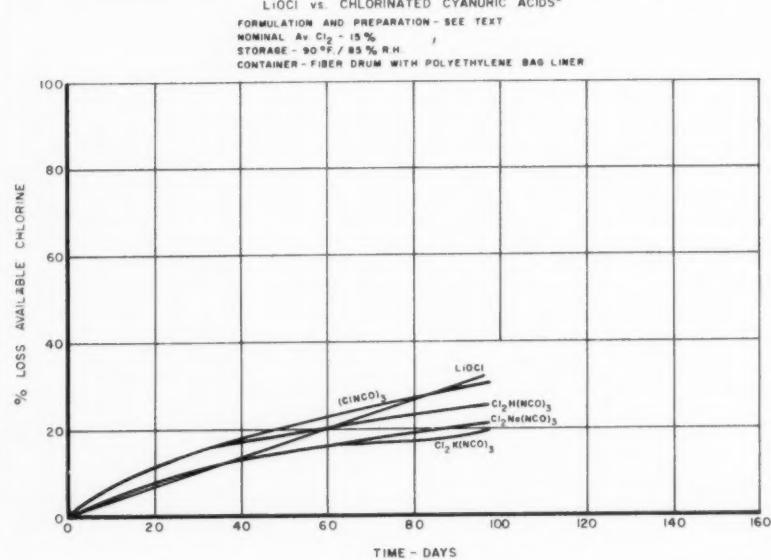
(From Page 79)

The plotted data reveal that—in similar packaging materials—the stability of the lithium hypochlorite formulation lies midway in the family of curves for the chlorinated cyanurics. The dashed line in Figure IV shows the stability of the same lithium hypochlorite formulation when packaged in polyethylene.

Figure V shows stability information for commercial laundry bleaches containing 15 per cent available chlorine. A lithium hypochlorite formulation was compared with the reported stability of formulations of four different chlorinated cyanuric compounds. Compositions are shown in table.

Packaging of all five samples was the same. The curves show that the lithium hypochlorite product compares very favorably with the cyanurics.

**FIGURE V**  
COMPARISON OF STABILITY OF DRY COMMERCIAL LAUNDRY BLEACHES



	Lithium Hypochlorite	Chlorinated Hypochlorite	Cyanuric
Available chlorine	15.5	15	
Lithium Hypochlorite (35% Av. Cl <sub>2</sub> )	46	—	
Sodium Tripolyphosphate	30	40	
Sodium Metasilicate	—	15	
Sodium Chloride	24	—	
Sodium Sulfate	—	Balance	

### Bulk Shipping

Lithium hypochlorite (35 per cent available chlorine) is normally packed in fiber drums with polyethylene liners. ICC Specification containers are not required since dry lithium hypochlorite compounds containing 39 per cent or less of available chlorine are not classed as dangerous articles under the Interstate Commerce Commission Regulations. ■

### Perfuming Soaps

(From Page 54)

ample, of cyperus, elsholtzia, campane, atractylis, spikenard and various cedrus, zanthoxylum and curcuma oils. And there are many others.

Cyperus oil of Chinese origin has already found application in modern soap perfumery. Its woody, herbaceous odor blends well with the usual constituents of fougeré, and I have even known of 20 per cent of it being employed in a spicy, lilyed complex. Cyperus oil from India is similar in odor but of a rather heavier tonality.

Like Dr. Horst Schmidt, who has written about its possibilities at some length, I have experimented with the Chinese Elsholtzia oil, derived from the labiate *Elsholtzia cristata*. The fresh, heady and fragrant odor of this oil can find many applications. Schmidt suggests the use of 9 per cent of elsholtzia oil in a jasmin composition for soaps, 6 per cent in a fantasy compound, and as



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much as 30 per cent in a standard blend for perfuming washing powders. I would add that it can impart an attractively light, floral-herbal note to many soap perfumes, and blends particularly well with caraway, thyme, sassafrass, patchouli and cassia oils.

Well worth the attention of soap perfumers is the South Indian Mullilam oil, an inexpensive, light-colored oil obtained from *Zanthoxylum rhetsa*, which also appears to be indigenous to China. This oil has a fresh, peppery top note and a spicy fruity background. Almost equally interesting is an oil from the same source and derived from *Curcuma aromatica*, a close relative of turmeric.

I have written elsewhere of the many possible applications of the Chinese *Atractylis* oil. This, too, is of considerable interest as a modifier of conventional soap perfumes.

Where price and availability permit, many other essential oils not normally familiar to the soap perfumer deserve to be used experimentally in the elaboration of new perfumes. In addition to those I have mentioned, reference may also be made to "The Rarer Essential Oils" described some years ago by H. M. Dumont.

*(To be Concluded)*

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#### Onyx Has New "Maprosyl"

A 30 per cent aqueous solution of sodium lauroyl sarcosinate has just been placed on the market by Onyx Chemical Corp., Jersey City 2, N.J. "Maprosyl 30" is an anionic surfactant claimed to combine the detergency, low order of toxicity, and good dermal properties of soap with the absence of lime soap formation typical of synthetics.

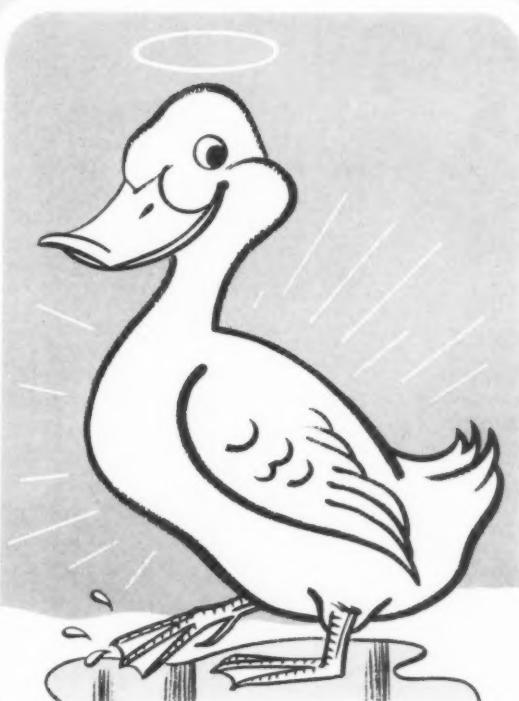
Corrosion inhibiting properties are said to make "Maprosyl 30" a desirable ingredient of pressure packaged window and upholstery cleaners, shaving creams, etc. Maximum foaming and detergency are exhibited in the neutral and mildly acid pH range. Pronounced substantivity to protein makes "Maprosyl 30" a good shampoo component, according to Onyx.

A data sheet is available describing the product and suggesting its application in a wide range of formulations, including upholstery cleaners, dishwashing compounds, shampoos, etc.

SEPTEMBER, 1961



## combats delinquent detergency



#### CARBOSE® . . . a Wyandotte Key Chemical

Because CARBOSE (a modified CMC) is fully compatible with both soaps and synthetics . . . most products need not be modified to gain visibly in detergency from its use. How about yours? Nothing could be easier than to try it and see . . . and the chances are better than good that you'll like the results. Why not call us in?

**WYANDOTTE**



MICHIGAN ALKALI DIVISION, WYANDOTTE, MICHIGAN



**From Unmatched Facilities . . .**

**. . . comes Schrader's Superior  
Aerosol Valve**

Every part of this aerosol valve except the dip tube is a Schrader product...and only Schrader's design and production facilities, greatest in the aerosol field, made it possible.

For example: techniques new to the aerosol industry were developed by Schrader to control rubber compounds' hardness, high resistance to compression set, surface smoothness, size uniformity, and service life. Exhaustive research into wire sizes, diameters, pitch and length has provided a superior valve spring with controlled tension. Rigorous new tests and special equipment were devised to control quality of each component. New production methods were used to

insure uniformity and precision.

The result is the world's closest approach to a universal aerosol valve. It can handle a wide range of product viscosities with feather-touch actuation and true-aim spray control.

Uncompromising quality, extending from formulation of compounds to inspection and testing of components and assembled units is typical of Schrader. This valve is the culmination of 117 years of experience in meeting and solving pressurized air problems. Discuss your aerosol valve needs with Schrader's Aerosol Engineers.

**Aerosol  
Valves**

**Schrader**  
a division of **SCOVILL**

**A. SCHRADER'S SON Division of Scovill Manufacturing Co., Inc.**  
**470 Vanderbilt Avenue, Brooklyn 38, N. Y.**

# Packaging...

**AEROSOLS • LIQUIDS • PASTES • POWDERS**

New pressure packaged "Afta" 10-second spot remover of Afta Solvents Corp., Glen Cove, N. Y., is designed to combine both effectiveness and safety. Product is lightly sprayed on fabrics, including carpets, upholstery and clothing, and wiped with dry cloth. Retails for \$1.00 in containers by Crown Cork & Seal and Continental Can Co. Valve by Precision Valve Corp., with Gilbert Plastics overcap. Propellant is "Freon 12" of du Pont, with Dow's chlorothane as solvent.

Automotive Chemicals  
Cleaners  
Detergents  
Deodorants  
Disinfectants  
Floor Products  
Insecticides  
Laundry Bleach  
Metal Cleaners  
Moth Products  
Polishes  
Shampoos  
Shave Products  
Soaps  
Liquid Starch  
Toiletries  
and other  
Chemical Specialties

*A market for over 28 billion packages annually*







*Your Anchor Man  
brings you all the benefits  
of SPECIALIZATION  
in glass packaging*

In short, this means uniform, high quality glass containers and closures . . . specialized technical service and prompt deliveries . . . all resulting in efficient, economical production and dependable protection for your products. For more details contact your Anchor Man or write Anchor Hocking Glass Corporation, Lancaster, Ohio.

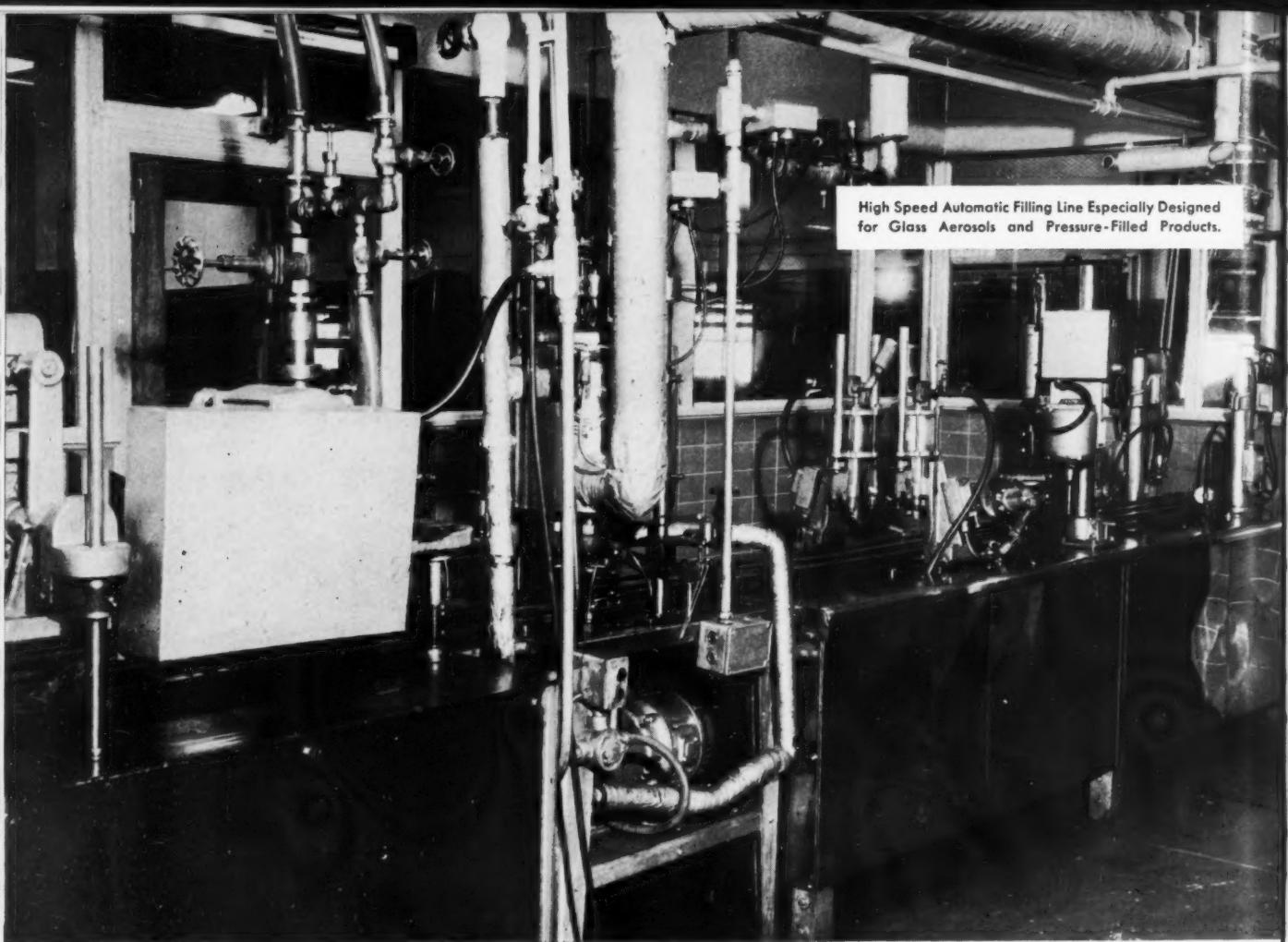


**ANCHOR HOCKING**  
*Specialists In Glass Sales-packages*

**Anchorglass Containers**—crystal, amber, emerald green, georgia green—  
standard styles, sizes, finishes or private mold designs

**Metal Closures**—screw and lug types

**Molded Closures**—stock and private design in a wide range of colors,  
featuring liner retaining ledge.



High Speed Automatic Filling Line Especially Designed for Glass Aerosols and Pressure-Filled Products.

# FLUID's only product is SERVICE -therefore we don't compete with customers

The business activities of Fluid Chemical Company, Inc., do not include the manufacture or sale of any product for our own account. Our sole product is contract liquid and aerosol filling service. Obviously, for this reason, there can be no conflict of interest between us and our customers.

FLUID has two of the largest and most modern contract liquid and aerosol filling plants in the United States, with seven filling lines. Ample formulating and storage facilities are also available, as required. Quality control of materials and of mixing and filling operations leaves no margin for error.

A completely equipped laboratory and skilled technical staff are capable of formulating your product for liquid, spray or foam dispensing. Deliveries are facilitated by an eight-car railroad siding, multiple shipping dock, complete warehousing and up-to-date mechanized handling facilities.



Write or telephone us for an early exploratory conference regarding your filling requirements.

**FLUID**  
*Chemical Company, Inc.*

MANUFACTURING CHEMISTS SINCE 1921

876 Mt. Prospect Ave., Newark, N. J.

HUmboldt 4-1000

## Woman's View of Detergents, Their Packaging

**W**HAT does the housewife expect from a modern laundry detergent designed for use in a home washing machine? At the recent meeting of the German Soap Association (SEPAWA) a housewife was invited to answer this question at least in part.

With 30 per cent of all German households owning an automatic clothes washer and a rapid trend toward further expansion, this market is important. Annual consumption of detergents for use in home washers is placed at somewhere between DM 500,000,000 and DM 600,000,000 (\$125,000,000 to \$150,000,000, approximately). In addition to appliance owners, users of washers in communal laundries are, of course, consumers of such products.

The speaker, Frau Dr. von Strantz, first pointed out that industry had neglected to educate the housewife to the point where she can really fully profit from the advanced products at her disposal. The terms "wetting agent, soil carrier, oxygen releasing compound, and optical brightener" mean nothing to the average housewife, she said and reminded her audience that advertising claims can not take the place of educational and informative material.

Dr. v. Strantz summarized the housewife's demands and desires as follows: First and foremost, the detergent must really clean, not only by washing away soluble soil but also by removing—with the help of agitation—soil considered removable only by mechanical action. In addition, the ideal detergent should remove stains such as traces of fruit, wine, cocoa, blood, coffee, etc. While it should leave the white wash as white as possible, it must not attack colors and must be completely harmless to the fibers.

All these stipulations should be met by the ideal detergent not

only on all types of natural fabrics but also on synthetics. Furthermore, it should retain its performance characteristics as soil remover, brightener, and stain remover without impairing color or fiber at varying temperature levels even below boiling point. At the same time it should be economical in use.

The detergent should leave the wash in sanitary condition, even if laundering takes place at temperatures around 30°C. The pleasant "hand" of the fabric should be preserved or created by the washing compound which must leave no deposit on the fabric.

The ideal detergent, usable in all types of washers, should leave no precipitate in the machine. Excellent and rapid rinsability are other properties a detergent should possess. Furthermore, the ideal detergent should leave a "delicate" fragrance on fabrics, one sufficiently "discrete" not to clash with any perfume. The most desirable fragrance would resemble the "ozone" odor of sun dried linen.

Fully aware that one ideal detergent combining all these per-

formance characteristics is probably unattainable, the housewife would like to see as close an approach to this ideal as possible. Dr. v. Strantz substantiated some of the individual demands by changes in modern living, such as increasing use of pastel colors not only for personal garments but also for household linens and replacement of natural fibers with synthetics for many uses. Preservation of the fabric and of its "hand" are more important than ever, because the modern household has fewer changes of linens, necessitating more frequent laundering, encouraged by the automatic washer.

Certain problems, such as shortening of the rinse cycle can be solved only by close cooperation of detergent formulators and appliance engineers.

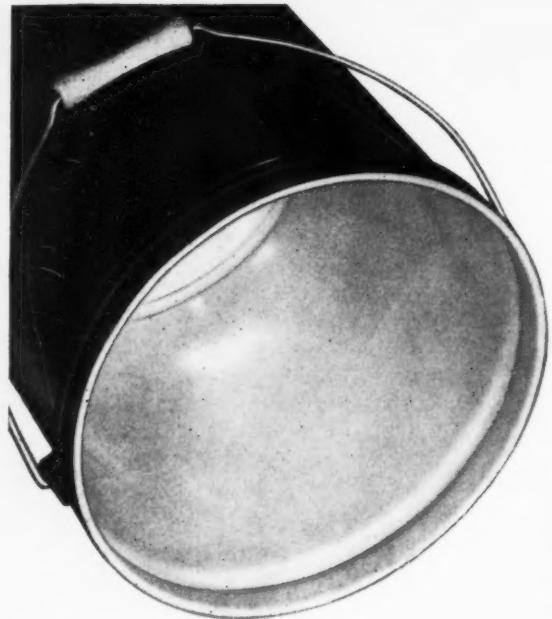
Apart from actual performance, Dr. v. Strantz voiced a number of other wishes and objections common among users of modern laundering detergents.

Moderate foaming is an advantage not only in the automatic laundering process but also in other applications. High foam is a nuisance and a waste of time in light hand laundering, where the

(Turn to Page 143)

**Fluorescent packages promote impulse buying at point of purchase.** "Oxydol," "Tide," and "Parade" packages, shown in picture, are all printed with fluorescent inks in conjunction with conventional color.





the  
Inside  
Story  
in



## STEEL PAILS

Choosing the *right* protective lining for straight sided steel pails is vital in the successful packaging of hundreds of valuable products which go to market in these sturdy containers. **CENTRAL** not only has the experience of years, plus the most up-to-date data on new developments, to help pinpoint that *right* lining—but the modern equipment and the rigid quality control practices which marry lining to steel in the smooth, non-flaking or cracking, pin-point-free coatings which mean *positive* protection for your product under all kinds of shipping, storage and use conditions. The evidence? It's in the long list of packagers, large and small, who have for many years depended on **CENTRAL's** skill, experience and high standards to keep their products safe. Can we help with *your* product?



**CENTRAL** makes a complete line of Steel Shipping Pails in its big, ultra-modern plant—straight side, flaring, lug cover, closed top—in a full range of sizes from 1 to 15 gallons (domed utility cans in 2½ and 5 gallon sizes, too—and slip cover cans from 2 oz. to 20 lb. capacity.)

You have your choice of all kinds of fittings and closures. And **CENTRAL's** fully equipped lithographing department stars in designing and producing sparkling, clean, colorfully decorated packages that really take your customer's eye. May we develop a design idea from your label or literature? **CENTRAL** should be working with you. Call us any time!

**"famous for fast service"**

**CENTRAL**

**CAN COMPANY inc.**

3200 SOUTH KILBOURN AVENUE • CHICAGO 23, ILLINOIS



# packaging notes

## Crown Advances McGinley

Crown Cork & Seal Co., Philadelphia, recently announced the appointment of Gerald H. Mc-



Gerald H. McGinley

Ginley as marketing manager of machinery sales. He will be headquartered at Crown's Baltimore office.

Mr. McGinley, associated with Crown since 1958, had been serving as district sales representative in the company's New York office. Before joining Crown, he was on the administrative staff of W. R. Grace Co., New York.

## New Bradley-Sun Office

The Bradley-Sun Division of American Can Co., New York, has moved its main office to U. S. Highway 22, Union, N. J., it was announced recently. The headquarters of the division were formerly located in Hillside, N. J. The new telephone number is Murdock 7-2500.

## United in Plastic Bottles

United Plastics Corp., Fitchburg, Mass., thirty-year old manufacturer of plastic housewares and allied products, has entered the field of plastic bottles and other containers. The company has

added blow molding equipment for plastic bottle and jar manufacture and is beginning production of these items. The firm, established in 1930, is located at 17 Simonds Place, Fitchburg. They are one of the largest American manufacturers of plastic housewares.

— ★ —

## William Wilson Dies

William F. Wilson, 54 president and general manager of Anchor Cap & Closure Corp. of Canada, Ltd., Toronto, died August 19 at Toronto General Hospital following a heart attack.

Mr. Wilson, who joined Anchor Cap & Closure Corp. of Canada, Ltd. in 1928 as a salesman, was named vice-president of sales in 1946. He was elected president and general manager of the company, a subsidiary of Anchor Hocking Glass Corp., Lancaster, O., in 1953.

— ★ —

## Rheay Joins Vulcan

John C. Rheay has joined the sales staff of Vulcan Steel Container Co., Birmingham, Ala., it was announced recently. Mr. Rheay will serve as the sales-service representative for the firm's Florida territory.

John C. Rheay



## Continental Changes

Lee Mason has been appointed general manager of the metal specialties and "Decoware"



Lee Mason

metal housewares line of Continental Can Co., New York, it was announced recently. He replaces F. B. Devere, who has resigned from the company.

P. H. Black, formerly district sales manager in Boston, succeeds Mr. Mason in his previous position as sales manager for industrial and household product cans.

— ★ —

## Guest Pac Names Jacobs

Milton B. Jacobs has been appointed to the newly created position of assistant to the president of Guest Pac Corp., New York, it was announced recently. Guest Pac is a selective product sampling organization, serving the drug, cosmetics, toiletries and food industries.

Mr. Jacobs has also been appointed to a second newly created position, president of Guest Pac's subsidiary, G. P. Packaging Corp., Yonkers, N. Y. The firm does contract assembly work — labeling, filling, collating, bagging and heat sealing for industrial concerns. He was formerly vice-president in



**Shelf satisfaction yields buyer acceptance** • Whether it's the golden yellow of your egg shampoo or the rich ruby redness of your cough syrup, it will catch the eye of the buyer faster in crystal-clean glass by Brockway. Only glass containers give buyers eye-stimulation to trigger purchase desires. To move your product off the shelf, court buyer acceptance with glass containers —quality proved glass containers through **BROCKWAY VISION IN GLASS**.



COMPANY, INC., Brockway, Pennsylvania

Sales Offices in Principal Cities

SUBSIDIARIES: Demuth Glass Works, Inc., Parkersburg, W. Va.

Tygart Valley Glass Co., Washington, Pa.

Celluplastics Inc., Newark, N. J.

charge of marketing for Cloroben Chemical Corp., and assistant to the president of Standard Chlorine Chemical Corp., both located in South Kearny, N. J.

—★—

### Packaging Seminar

The College of Business Administration and the College of Pharmacy of St. John's University, Jamaica, N. Y., in cooperation with the Packaging Institute, New York, will hold a seminar on packaging beginning Oct. 25. The program, under the joint chairmanship of Thomas Chambers, College of Business Administration; Dr. John J. Sciarra, College of Pharmacy; and James Field of the Packaging Institute, will consist of a series of six, two-hour presentations, to be held on Wednesday evenings from 7:00 to 9:00 p.m. Each session will be followed by a question and answer period.

The first session, scheduled for October 25th, will deal with the "Aims of the Seminar"; "Packaging and Market Potential in the '60's"; "Marketing and Development"; and "Packaging Operations," followed by a question period.

The second session, to be held Nov. 1, is entitled "Packaging Materials I," and will explore "Paper and Paperboard"; "Glass Containers"; "Metal Containers."

The basic line of package coding, marking and imprinting machines produced by Adolph Gottscho, Inc., Hillside, N. J. has been incorporated in a handy file folder designed for use as a permanent holder for related data. Folder also includes a "Package Imprinter Selector Chart," which shows the type of imprinter to use for every kind of package and operational sequence.

"Packaging Materials II," the third meeting, to be held Nov. 8, will cover "Plastics," a) Basic Materials, and b) Converted Materials; and "Aerosol (pressurized) Packages."

The fourth session, scheduled for Nov. 15th, entitled "Production Line Operation and Packaging Equipment," will deal with the "Selection of Packaging Equipment" and "Production Line Operation," to be followed by a panel discussion.

The subject of the Nov. 29th meeting, "Procurement and Specifications," will feature discussions of "Package Material Purchasing for Foods"; "Package Material Purchasing for Drugs"; and "Shipping and Handling."

The final session, scheduled for Dec. 6, will explore "Packaging Regulations" and "Packaging Future," to be followed by a reception.

### Rheem Appoints Cake

Rheem Manufacturing Co., New York, has announced the recent appointment of Ben F. Cake as vice-president in charge of operations for its container division located at Linden, N. J. Mr. Cake, who joined Rheem in 1950 as an engineer at the South Gate, Calif., plant, has been manager of operations for the division since June 1960.



### Brockway, first name in containers for:

	foods		pharmaceuticals and proprietaries
	prescription ware		beverages
	beer		liquors
	plastic containers		vials and tubing

Integrity in glass since 1907





# Beauty

*in nature is infused  
at the time of creation . . .*

# Quality

*is a matter of natural perfection*

A perfect stalk of wheat possesses inherent beauty and quality. Man-made products are different. The attributes of beauty and quality result from the application of skill, ingenuity, judgment and care.

At Newman-Green, quality has been manufactured into every aerosol valve carefully, patiently. Through the years, every effort has been made to produce a valve that is as nearly perfect as experienced human capabilities will permit.

Newman-Green embodies the finest component parts obtainable for aerosol valves that pressure fill faster, more uniformly. One of the many outstanding features Newman-Green pioneered is the complete switch of the spray pattern in seconds simply by changing the spray head. This is only one of the many features Newman-Green gives your aerosol products for a competitive edge.

Call in your order to the Newman-Green representative nearest you . . . do it today.

**NEWMAN-GREEN, INC.** *Creative Aerosol Valve Engineering*

**SALES OFFICES:**

**EASTERN DISTRICT**  
415 Lexington Avenue  
New York 17, New York  
MUrray Hill 7-7147

**MAIN OFFICE & PLANT**

57 Interstate Avenue  
Addison, Illinois  
Kingswood 3-6500

### Redesigned Kiefer Filler

Karl Kiefer Machine Co., Cincinnati, recently announced a new design for its "Vari-Visco Filler." The improved machine is capable of filling more than 300 containers per minute, the company states.

A through conveyor serves the machine. A worm timer on a floating mounting, in addition to large diameter feed and discharge wheels, provides smooth container handling. Elevating stainless steel trays give "bottom up" filling. The center column drive is equipped with a safety detent operating a limit switch in the motor control circuit, which also makes possible adaptation to synchronized drive arrangements.

The worm timer has a biased spring engagement with containers so that a jammed or tipped container will not result in damage, but will merely move the worm outwardly. This action opens a limit switch and stops the machine. Any jam in the feed wheel or discharge wheel also stops the machine quickly.

A magnetic clutch in the pump drive permits operation of the machine without driving the pumps. A two speed transmission in the drive to the center column controls flow of containers independently of pump speed, thus enlarging the range of the machine. A variable speed drive controls

both pumps and center column so that volume delivered is not altered by a change in container speed. A separate control wheel provides a variation in the volume delivered while running.

A neutral position in the two speed transmission enables the pumps to be driven while the head is stationary. This allows for easy flushing, and complete dismantling in a short time. The machine is offered with wetted parts of stainless steel or of cast iron.

The new design makes for quick and easy changeover from one container to another; unit is available in an eight station design carrying a maximum container diameter of 7", and in a 12 station design for a maximum container diameter of 5 3/16".

—★—

### Licenses Peerless Tube

Thatcher Glass Manufacturing Co., New York, has licensed Peerless Tube Co., Bloomfield, N. J., to manufacture plastic squeeze tubes under terms of an agreement recently announced by both companies. Peerless will be licensed to produce polyethylene, linear polyethylene, vinyl and polypropylene tubes currently manufactured by Thatcher's plastic tube division.

At the same time it was announced that Peerless will build a 33,000 foot addition to its facilities at Bloomfield, to be used for manufacturing and storage.

### New Vulcan Vice-President

Robert B. Newman has been named vice-president and director of sales for Vulcan Containers, Inc.,



Robert B. Newman

Bellwood, Ill., according to a recent announcement by Gordon D. Zuck, president of Vulcan-Associated Container Companies, Inc., Birmingham, Ala. Mr. Newman joined Vulcan-Associated Container Companies, Inc., in 1959 and served as assistant to the president.

—★—

### Anchor Hocking Changes

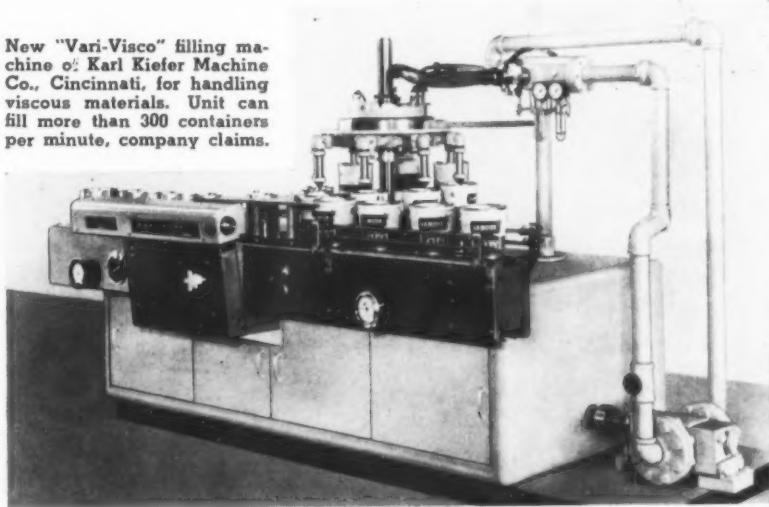
Anchor Hocking Glass Corp., Lancaster, O., recently announced the following organizational changes among its headquarters personnel: S. B. DeMerell appointed senior vice-president of the administration division; W. B. Snell, Jr., vice-president, will concentrate on personnel administration matters; Gordon W. Herrold, vice-president, succeeds Mr. Snell as vice-president of manufacturing; and E. M. Lawrence has been appointed vice-president in charge of sales for the package division.

—★—

### New Celanese Plants

Celanese Corp. of America, New York, recently announced the construction of a 90,000 square foot plant at Batavia, Ill. to produce blow molded plastic containers. The unit is expected to be completed in October. The company also announced the purchase of a plant in New Castle, Del., where it will transfer its blow-molded container facilities from Trenton, N.J.

New "Vari-Visco" filling machine of Karl Kiefer Machine Co., Cincinnati, for handling viscous materials. Unit can fill more than 300 containers per minute, company claims.



# You have a working partner in aerosols at General Chemical

**Product bulletins from General Chemical provide a basic library on aerosol formulations for contract fillers.**

To help you in your formulating work for customers, General Chemical has compiled informative data sheets on a large number of aerosol products. Bulletins cover existing aerosols and new products developed in General's laboratory. Information is included on formulations, product advantages, methods of application, stability, flammability, pressures used and competitive products. These informative bulletins provide a basic library of technical data on aerosols to help you develop formulations and evaluate product performance for your customers.

In addition, General Chemical offers these comprehensive services to help you strengthen your position as an aerosol specialist:

**Sales presentations** — General Chemical can help you gain new business by assisting with your sales presentations to prospective aerosol marketers.

**Formulating aid** — General Chemical's fully equipped laboratory and staff of experts back up your formulating work for customers.

**Marketing consultations** — General Chemical specialists will assist and advise you on marketing and promotion ideas for presentation to your customers. These helpful services are available free to contract fillers from General Chemical . . . producer of Genetron® aerosol propellants. General provides standard propellants and special blends for virtually every type of aerosol product. For full information about our services to contract fillers, phone or write the General Chemical office nearest you.

**genetron®**  
aerosol propellants

Putting the "push" in America's finest aerosols

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Chemical  
GENERAL CHEMICAL DIVISION  
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# MASTERPIECES IN METAL CONTAINERS



## new from Clark

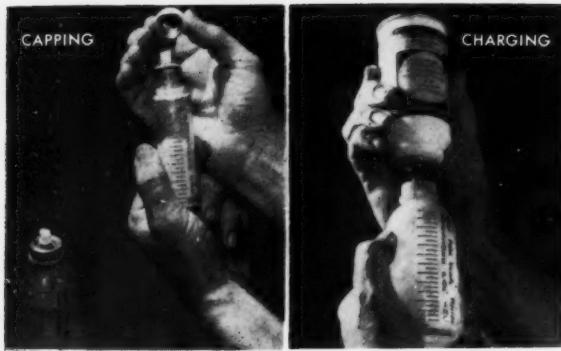
Two-piece drawn aluminum cans with compound-sealed ends are excellent containers for many chemical specialties, food, or drug products requiring hermetic sealing. These cans are economical, lightweight and rustproof. They can be coated inside or out. They stack easily for compact storage . . . are available in 18 sizes. Write for information on this latest product of Clark research and development.

Chinese Bronze Incense Burner of Han Dynasty—courtesy of The Art Institute of Chicago \*

2000 years ago a buyer made a decision on a new container for incense. He could have chosen one made of stone or pottery, but like so many people throughout the ages, he selected metal. Today, you have a much wider selection of materials for packaging chemical specialties . . . and metal containers are still your best choice. Clark offers you an unusually wide variety of structures, coatings, finishes, functional closures, attractively lithographed colors, and graphic designs. Clark containers give fine products the protection they require—the distinctive quality image they deserve. Whatever your packaging needs, come to Clark, where personal service and precision manufacture guarantee satisfaction . . .

**J. L. CLARK**  
ROCKFORD, ILLINOIS





## PREPARE YOUR OWN AEROSOL SAMPLES

"VISUAL TEST KIT" NO. 600

IDEAL FOR TESTING FOR ★ COMPATIBILITY  
★ STABILITY ★ SPRAY PATTERNS ★ CONSTANT  
PRESSURE ★ FORMULATIONS, and other tests prior  
to actual production packaging.

- FILL VOLUMETRICALLY OR  
GRAVIMETRICALLY
- SUITABLE FOR NITROGEN OR  
FLUOROCARBON PROPELLANTS
- REUSABLE TEST BOTTLES

### 4 SIMPLE STEPS:

- 1) Fill Ingredients.
- 2) Lock Valve in Place.
- 3) Charge with Propellant.
- 4) Check Pressure, and Spray.

### COMPONENT PARTS AND COST:

1 SET INCLUDES: 6 - 4-oz. Graduated Plastic Coated  
Glass Bottles; 6 - Valve Couplings; 20 - Valves,  
Assorted; 20 - Tips, Assorted; 2 - Transfer Buttons.

Price \$18.00 F.O.B. West Palm Beach, Fla.

### PROPELLANTS:

6-1-lb. Propellant 11 (Trichloromonofluoromethane)	\$17.50
6-12-oz. Propellant 12 (Dichlorodifluoromethane)	17.50
6-12-oz. Propellant 114 (Dichlorodifluoroethane)	17.50
6-12-oz. 12 & 114 (50% - 50%)	17.50

(May be assorted in any quantity)

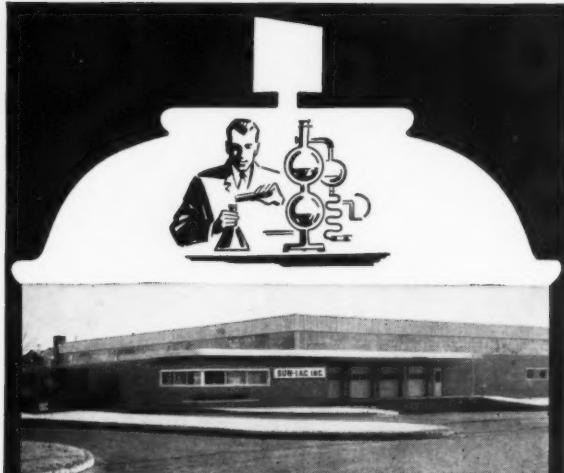
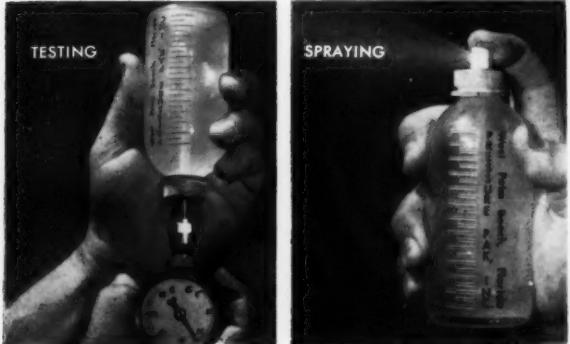
### PRESSURE TESTER

All prices F.O.B. West Palm Beach, Fla.

Write for a complete brochure on Pressure Pak Aerosol Filling  
and Testing equipment.

## PRESSURE PAK, Inc.

Division of American International Development Corp.  
421 Monceaux Road      West Palm Beach, Fla.



## SUN-LAC EXPANDS TO FILL GROWING AEROSOL PACKAGING NEEDS

Whether you market perfumes or insecticides, cosmetics or specialties—Sun-Lac offers answers to your every aerosol packaging problem.

The completion of our new plant in Clark, New Jersey provides the most up-to-date production and laboratory facilities to . . .

- Produce new, tested, water based formulations
- Pressure and cold fill upwards of 30 million units per year
- Handle long or short production runs at a saving to you
- Provide precise quality control
- Develop specialized formulations to suit your product line

From product packaging to distribution, Sun-Lac's entire operation is geared to help you go places in the ever increasing aerosol market.

For complete information on how Sun-Lac's expanded facilities can help you—write, wire or phone . . .

**SUN-LAC, INC.**  
195 Terminal Ave. • Clark, New Jersey  
**Fulton 1-7500**

### New Emhart Case Gluer

The Portland, Connecticut, Division of Emhart Manufacturing Co., has introduced a new case gluer, Type SK-455, said to effect lower glue consumption, neater cases and easier plant maintenance.

The unit economizes on glue usage by applying it in uniform stripes instead of solid coatings, the company reports. Neater cases are said to be the result of case-controlled skip-gap pattern of application that prevents glue from dropping through the slots onto the product.

Glue is fed from a reservoir under low pressure through hoses and applicators directly onto the case flaps. Glue is exposed to the air only at the moment it is applied. Width and length of the glue pattern may be pre-set and then remain constant, Emhart states.

— ★ —

### Pckaging Symposium Set

The second Symposium on Packaging of Chemical Products, sponsored by the Chemical Packaging Committee of the Manufacturing Chemists' Association, Inc., Washington, D. C., has been scheduled for March 13-14, 1962 at the Chase-Park Plaza Hotels, St. Louis, it was announced recently.

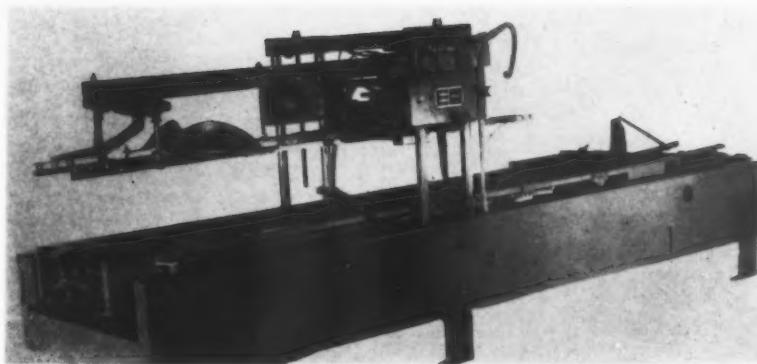
Arrangements for the symposium are under the direction of Robert F. Uncles, chairman of the Symposium Committee and manager of the packaging and labeling section of American Cyanamid Co., New York.

— ★ —

### Colton Appoints Lessig

Appointment of Carl Lessig as field service engineer for the New York area, has been announced by Arthur Colton Co., Detroit manufacturer of tabletting and filling machines for the chemical, pharmaceutical, drug and food industries.

Mr. Lessig, with offices at 556 Grand Ave., Englewood, N. J., had been machine assembly foreman at the Colton Mancelona, Mich., plant for the past two years.



Lower glue consumption, neater cases and simplified plant maintenance are among the advantages claimed for Type SK-455 case gluer, recently introduced by the Portland (Conn.) Division of Emhart Manufacturing Co.

Prior to that he had been associated with Hope Machine Co., Philadelphia, for 12 years as assembly foreman.

— ★ —

### CCC Corrugated Price Rise

Continental Can Co., New York, has announced an eight per cent price increase in corrugating material used to make shipping containers. The price rise of \$9.50 per ton became effective Sept. 1 and applies east of the Rocky Mountains, it is reported.

— ★ —

### New Rieke Drum Seal

"Rieke Polyethylene Safe-seal," a new concept in design of cap seals for steel drums has recently been introduced by Rieke Metal Products Corp., Auburn, Ind. Easy and safe to remove, the "Safe-seal" is said to be tamper proof.

Available in both two inch and three quarter inch sizes, "Safe-seal" is affixed directly on the metal drum with standard "ViseGrip" sealing tools for all thicknesses of drum stock from 26 to 16 gauge.

— ★ —

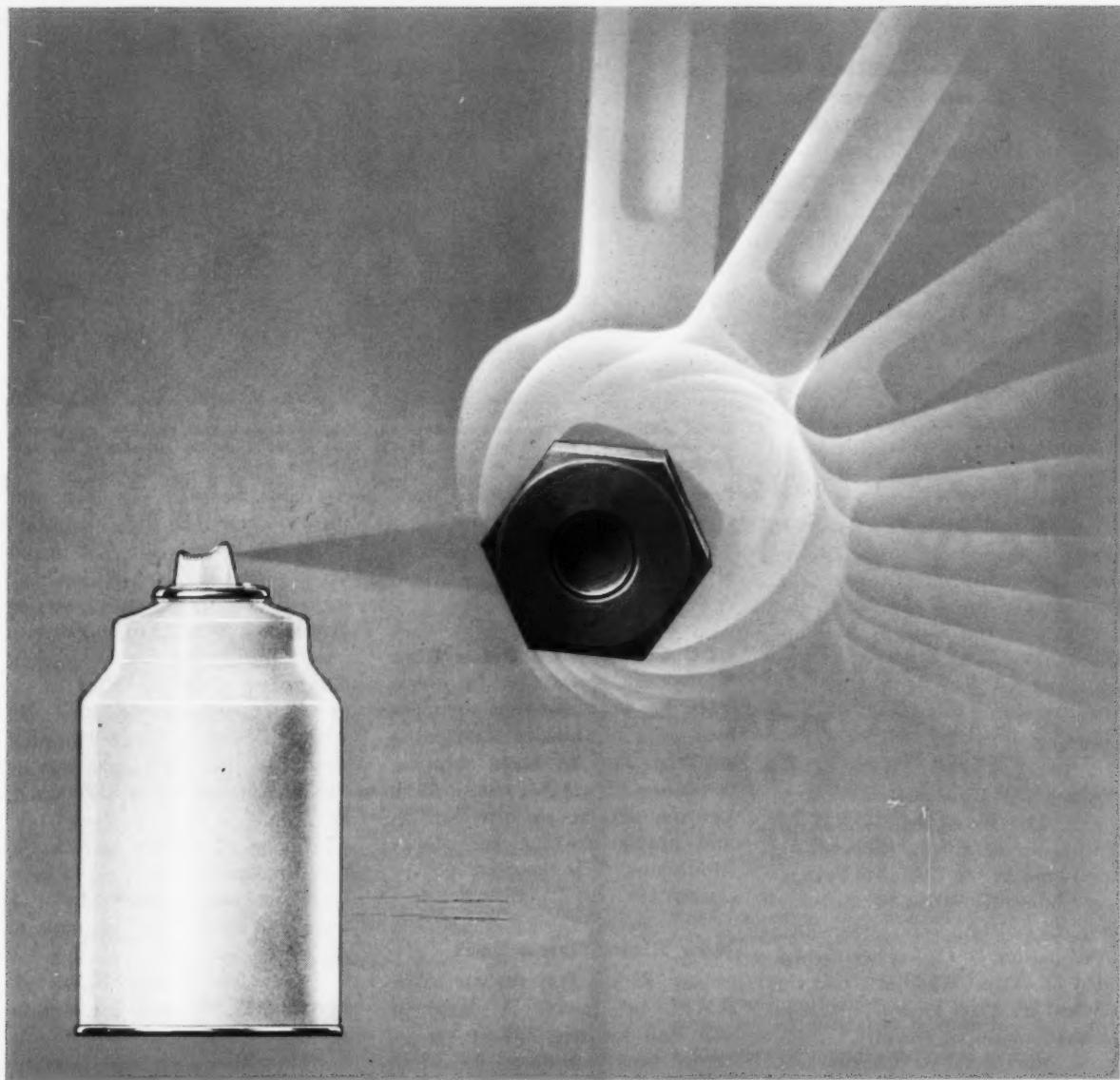
### Shipping Cost Booklet

A new booklet entitled, "35 Ways to Reduce Your Shipping Costs," has just been published by the Institute for Business Research, Inc., 49 West 57th St., New York. Listed are 35 specific ways to reduce transportation costs, by looking closely into the methods, privileges and alternatives available to shippers.

Author of the booklet is Raynard F. Bohman, Jr., of Bohman Industrial Traffic Consultants, Gardner, Mass., specialists in transportation cost control. Copies are available from the Institute at \$1.00 each.



Stock polyethylene bottles for detergents and household chemicals, in 12, 22 and 32-ounce sizes, are available from the plastic bottle and tube division of Continental Can Co., New York.



**PACKAGE YOUR PRODUCT IN AEROSOL CANS? WHY NOT?**

**HARDWARE IS NOW SPRAYED FROM THEM!**

Not only hardware products such as penetrating oils, but throat spray, paint remover, toothpaste and many more. Why? Because aerosol cans make convenience a major selling advantage.

And why Crown? Because Crown originated disposable pressure packages. Crown offers you both the greatest experience and the most complete line—striking new seamless Spra-Tainers and Fabricated Cans featuring superb lithography. Pressures, propellants, internal coating systems—Crown knows aerosols from A to Z. Call on Crown!



**CROWN CORK & SEAL CO., INC.**

*cans • crowns • closures • machinery*

9300 Ashton Rd., Philadelphia 36, Pa.

## Anchor Hocking Adds to Research Center

**A** NEW building now under construction at Anchor Hocking Glass Corporation's research and engineering center in Lancaster, O., will house 13 laboratories and departments. It is scheduled for completion and occupancy in November.

Upon completion of the new unit, the Research and Engineering Center buildings will have 330 feet frontage and depth in excess of 300 feet; with a floor area of 100,000 square feet. The building design will complement that of the package engineering and research laboratories which initiated the center in 1950.

The enlarged center will permit consolidation of all Anchor Hocking corporate laboratories, research and development operations, including those for its container, closure, sealing machine, carton, tableware and industrial divisions.

Studies on glass structure will be one of the important phases of research work at the new Center, which will house, in one location, a complete cycle of research and engineering from pure theory to actual prototypes for tests under actual working conditions.

The package engineering and research laboratories division is divided into five laboratories:

bacteriological and chemical laboratories; experimental packaging laboratory; package engineering laboratory; carton laboratory, and product research, development and quality control laboratory. The carton laboratory will be enlarged and transferred to the new building upon its completion.

Projects to be undertaken at the Center will embrace the fields of chemical science and technology, and continue through a wide range of engineering. They will include work in organic, inorganic and physical chemistry, and both pure and applied research. They will also include exploratory research and development work in depth in all phases of engineering applicable to present and projected new products and manufacturing processes.

### Detergent Packaging

(From Page 131)

user must wait until copious suds go down the drain of the wash basin.

Dusting of detergent powders is a real problem to the sensitive consumer. The speaker called on industry to develop a laundry detergent in bar or cube form. This could be accomplished, she said, by

addition of a cellulose derived binder, which might at the same time add to the product's soil carrying capacity. Not only would dusting be eliminated, but handling and dosage of the product would be easier.

Consumers would like to see dosage instructions on packages given uniformly in grams rather than in fractions of a spoonful or cupful. Another acceptable solution would be a standardized measuring cup supplied with each package. Net weight of contents should appear on each package, to permit the purchaser to calculate how far the package will go.

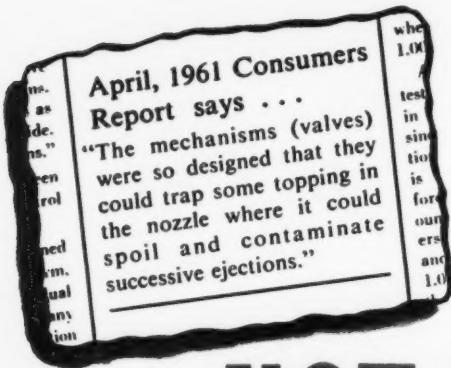
Pour openings of detergent packages leave much to be desired. First they are hard to "press in" in accordance with instructions, and, once opened, they form rims so ragged as to make pouring extremely difficult. With "giant" packages growing even more enormous, reclosability of the package becomes ever more important. A clean tight closure is essential. An additional reason for this requirement is the top heavy shape of detergent packages which frequently topple over and spill. A narrow base for a tall package is required for stacking on minimum shelf space in the supermarket but is a nuisance to the housewife. A carton of stable proportions would certainly be a boon to her. Location of the pour opening should be marked so as to be obvious, regardless which side of the container faces the user.

In his desires to tell all about the miracles his product will perform, the manufacturer loads the label with advertising claims leaving no space for instructions, Dr. v. Strantz reported. Instructions should be clear, explicit and easily legible, even for the housewife who wears spectacles. Surely, she explained, it is in the detergent manufacturer's own interest that his product be used correctly for optimum performance.

Translated and condensed from a paper by Dr. v. Strantz, published in full in *Seifen-Oele-Fette-Wachse*, No. 1 1961, pp. 1-4.

New Anchor Hocking research facility, shown in artist's conception, at right, will house 13 laboratories concerned with research in glass technology and glass engineering. New unit doubles company's research area.





# NOT TRUE...

## WHEN YOU USE PRECISION'S UPSIDE-DOWN VALVE



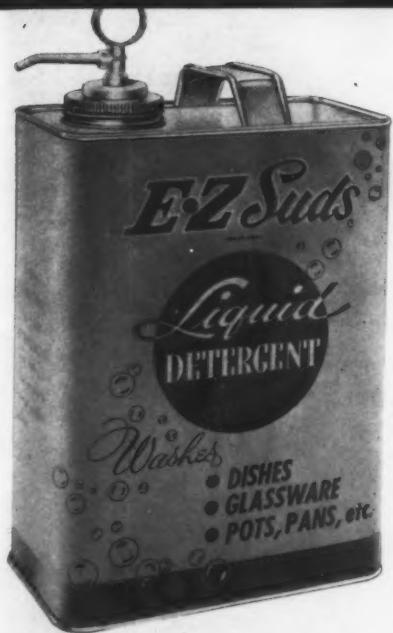
The new upside-down valve from Precision is constructed so that the spout may be opened and cleaned by merely holding it under the faucet. No contamination is then possible, and it allows complete evacuation of all the product in its original pure form time after time.

Just one more example of that extra care and attention to detail you get with all Precision valves. It's the quality and know-how that assures you of satisfied customers!

Take care, take Precision valves for your aerosol products.

**PRECISION VALVE CORPORATION**  
700 NEPPERHAN AVENUE, YONKERS, N.Y.





"E-Z Suds" liquid detergent for hand dishwashing, manufactured by East Coast Soap Corp., Brooklyn, is now available in one gallon tins (shown); five gallon, 30 and 55 gallon drums. Can is equipped with a "Uni-Squirt" dispenser; one push downward on the plunger meters enough detergent for a sinkful of suds, the manufacturer states. Product is sold only through sanitary supply distributors, who report growing preference among owners and opera-



tors of restaurants, bars and institutions for larger size detergent packages.

Pressure Products Co., West Chester, Pa., recently introduced "nuAero Starting Ether," in a seamless, aluminum, 16-ounce aerosol container. Improved "nuAero Starting Ether," is claimed to start diesel and gasoline engines faster and at lower temperatures than before. The taller, narrower, lighter can, retail-

ing at \$1.85, handles more easily and reduces shipping costs, the company states.

Allen B. Wrisley Co., Chicago, recently introduced "Soap Blossoms," their new, fragrant, toilet soap in floral design cakes. "Soap Blossoms," packaged nine to a nested gift box, are available in pink, maize, and turquoise, and retail for \$1.50, per box.

## WHAT'S NEW?

"Pretty Kitty" line of aerosol colognes, recently introduced by Rexall Drug Co., Los Angeles, includes "Siamese Mist Cologne" — oriental; "Angora Mist Cologne" — sophisticated; "Tabby" — light floral; and "Lynx" — woodsy. Bottles are sheathed with plastic covers in white and pastel shades of green, yellow and pink. Each container carries a special "Pretty Kitty" label in applied color to help identify the fragrance. Owens-Illinois Glass Co., Toledo, supplies the glass pressure bottles and decoration. Metal Fabrications, Inc., Waterbury, Conn., manufactures the metal slip-on cover caps; and Risdon Manufacturing Co., Naugatuck, Conn., makes the valve.

"McIntyre's Metal Magic," a new aluminum cleaner with a formula designed to also clean brass, copper, chrome and other metals, has recently been introduced by McIntyre, Los Angeles. Available in 16 ounce and one gallon reusable plastic containers, the product is applied with a soft cloth and wiped off.





### Facing Page

A deluxe "Hypnotique" combination Christmas gift set recently introduced by Max Factor, Hollywood, Calif. Packaged in a pedestal base, reusable milk glass bowl, tied with a ribbon, includes 5 1/4 ounces of bath powder, four ounce bottle of aerosol cologne, two cakes of guest soap, six ounce hand and body lotion, and a lamb's wool puff. Package retails for \$12.50, plus tax.

A new trigger sprayer, developing up to 300 psi ejection pressure, has been introduced by AFA Corp., of Florida, Miami. Slight hand pressure produces a uniform fine spray from the unit, which is adaptable to a variety of home and farm applications. Twelve of 16 parts have been molded by Pearce-Simpson, Inc., Miami, of "Escon" polypropylene, supplied by Enjay Chemical Co., a division of Humble Oil & Refining Co., New York. Assembly of trigger sprayer, which has a polyethylene dip tube and O-ring, and a steel spring and rivets, is achieved by spin-welding.

A flint glass vase decorated in a gold starburst design has been introduced by Allen B. Wrisley Co., Chicago, as a container for its "Bubble Bath." Available in pink, green and maize, bubble bath and reusable vase are packaged in a gold colored carton to retail for \$1.00.

A handy, reusable plastic "shower bottle" is being offered free with the purchase of a bottle of "Halo" shampoo, by Colgate-Palmolive Co., New York. Blow-molded linear polyethylene bottle is offered with 7 1/2 ounce size of both "Regular Halo," and new "Dry Hair Formula Halo," retailing for about \$1.00 each.

### This Page

"Desert Flower" metered spray perfume, recently introduced by Shulton, Inc., Clifton, N. J., is packaged in a blue and gold, one-third ounce purse flacon. Said to give 250 metered sprays, unit is set in a turquoise and gold acetate gift box, to retail for \$2.50, plus tax.

Butcher Polish Co., Malden, Mass., recently introduced three new industrial cleaning products under the "Butcher's" tradename. Included are: detergent cleaner, germicide cleaner, and heavy duty stripper and cleaner. Said to be safe on all washable surfaces, products are packaged in one, five, 30 and 55 gallon sizes.

New gift item from Mem Co., New York, features a ribbon decorated, covered plastic goblet, holding five cakes of

flower shaped soap. Four and one half ounce package, with assorted cakes in pink, blue, yellow and green, retails for \$1.50.

Sno-Bol Co., Pontiac, Mich., recently introduced its "Sno-Bol" liquid toilet bowl cleaner in one-half gallon and gallon non-breakable plastic containers. The half gallon container for the commercial concentrate has a no-drip spout designed to eliminate waste. Both sizes are equipped with sturdy handles.

"Adorn" hair spray, produced by the Toni Co., Chicago, is being packaged with four plastic hair rollers and a hair styling booklet offered free for Fall promotion.

"Tub O' Fun" bubble bath, recently introduced by Allen B. Wrisley Co., Chicago, is packaged in a colorful jumbo "rocket." The lightly perfumed "Tub O' Fun Space Splashes" bubble bath package retails for \$1.19.

"Bronco" aerosol air freshener, available in floral, spice and mint fragrances, has just been introduced by Bronson Products Co., Chicago. Packaged in five and 15 ounce sizes, can features a self stacking "sure-lock" bottom that fits neatly onto overcap of can below.



Up to 37 ounces (1100 cu. cm.) in capacity!



**Impact extruded! No leakers!**

Full range of sizes to meet any requirement of the aerosol industry. Wide choice of diameters, heights and shapes.

One-inch opening to fit any standard 1" valve cup.

*Exclusive distributors for the North American Continent:  
Impact Container Corporation, 11125 Walden Avenue, ALDEN, New York.*

**Highest resistance!**

**300 psi**

**Lowest weight**

12 oz. container 1.41 ozs.  
6 oz. container .89 ozs.

Perfect decoration: base coating in any color plus lithographic printing in four colors.

All containers may be internally coated with special lacquers if they are to be filled with corrosive products.



**BOMBRINI PARODI-DELFINO**  
MECHANICAL DIVISION  
VIA LOMBARDIA, 31-ROME - ITALY 46.80 BOPARDE - ROMA

ht  
zs.  
zs.

**PAGE (S)**

B) MISSING



# new trade marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12 (a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany each notice of opposition.

**Flower King** — This for spray for providing luster to plant leaves and for plant mat and seeded flower mat. Filed Jan. 9, 1961 by Thermwell Products Co., New York. Claims use since May 15, 1960.

**Novocide** — This for antibiotic for use to control bacterial wilt on agricultural products. Filed Jan. 9, 1961 by Upjohn Co., Kalamazoo, Mich. Claims use since Oct. 13, 1960.

**Turgasept** — This for cleaning, deodorizing and sanitizing preparation for hospital and sickroom use. Filed Nov. 3, 1958 by Doho Chemical Corp., New York. Claims use since April 30, 1958.

**Pretty Baby** — This for germicidal diaper wash. Filed Nov. 28, 1960 by Chemical & Electronic Research Corp., Baltimore, Md. Claims use since August 10, 1960.

**Westasept** — This for liquid surgical soap. Filed Dec. 2, 1960 by West Chemical Products, Inc., Long Island City, N. Y. Claims use since Oct. 24, 1960.

**Calmal** — This for descaling composition. Filed Dec. 8, 1960 by American Calmal Corp., Hialeah, Fla. Claims use since Nov. 21, 1960.

**Westone** — This for liquid floor treatment preparation used for cleaning and sweeping floors and as a dust remover. Filed Dec. 29, 1960 by West Chemical Products, Inc., Long Island City, N. Y. Claims use since Jan. 1, 1941.

**Alkadem** — This for powdered alkali detergent for industrial laundering of textile fabrics. Filed Feb. 13, 1961 by Keever Starch Co., Columbus, O. Claims use since Jan. 10, 1961.

**Chemex** — This for insecticidal floor wax. Filed Dec. 10, 1959 by Chemex Industries, Inc., Tampa, Fla. Claims use since March 9, 1959.

**Waylay** — This for agricultural insecticide. Filed July 21, 1960 by Stauffer Chemical Co., New York. Claims use since July 13, 1960.

**Purex** — This for ammonia. Filed Dec. 8, 1960 by Purex Corp., Ltd., South Gate, Calif. Claims use since Aug. 25, 1960.

**Aquathol** — This for herbicide for use in bodies of water. Filed Dec. 28, 1960 by Pennsalt Chemicals Corp., Philadelphia. Claims use since May 27, 1960.

**Zolv** — This for degreasing and cleaning agent of the carbon tetrachloride type. Filed Nov. 25, 1960 by DuBois Chemicals, Inc., Cincinnati. Claims use since Aug. 19, 1960.

**Conversation** — This for floor polish. Filed Aug. 19, 1960 by Ball Chemical Co., Cleveland, O. Claims use since July 10, 1958.

**Rave** — This for floor wax. Filed Feb. 21, 1961 by American Home Products Corp., New York. Claims use since Jan. 24, 1961.

**Purex** — This for bleach having disinfecting and deodorizing properties. Filed Sept. 7, 1960 by Purex Corp., Ltd., South Gate, Calif. Claims use since June 15, 1960.

**Telodrin** — This for insecticides. Filed Oct. 24, 1960 by Shell Oil Co., New York. Claims use since Oct. 5, 1960.

**West** — This for liquid spray deodorant for household use. Filed Dec. 16, 1960 by West Chemical Products, Inc., Long Island City, N. Y. Claims use since Nov. 17, 1960.

**Trend-X Beads** — This for dry detergent for general industrial use. Filed April 25, 1960 by Purex Corp., Ltd., South Gate, Calif. Claims use since Jan. 30, 1959.

**Sunil** — This for soaps and non-saponaceous detergent powder for household washing and clearing purposes. Filed Sept. 12, 1960 by Lever Brothers, Port Sunlight, Ltd., Port Sunlight, Cheshire, England. Claims use since Nov. 10, 1959.

**D & L** — This for industrial type cleaning composition used in the exterior cleaning of buildings. Filed Feb. 8, 1961 by D & L Co., Baton Rouge, La. Claims use since March 15, 1960.

**Recall** — This for color shampoo for the hair. Filed Feb. 21, 1961 by Chesebrough-Pond's, Inc., New York. Claims use since Feb. 7, 1961.

**Dyne** — This for pipeline detergent-germicide for dairy cleaning in place. Filed Jan. 16, 1961 by West Chemical Products, Inc., Long Island City, N. Y. Claims use since June 1, 1960.

**Color Rise** — This for color shampoo for the hair. Filed Feb. 21, 1961 by Chesebrough-Pond's, Inc., New York. Claims use since Feb. 7, 1961.

**Viv** — This for floor wax and cleaner. Filed March 10, 1961, by Simoniz Co., Chicago. Claims use since March 1, 1961.

**The Skipper's Locker** — This for polish for woodwork and metal surfaces, especially for boats. Filed March 21, 1961 by Skipper's Locker, Inc., New York. Claims use since Nov. 10, 1960.

**Trey** — This for household bleach. Filed Feb. 15, 1961 by E. I. du Pont de Nemours & Co., Wilmington, Del. Claims use since Feb. 1, 1961.

**Flourish** — This for color shampoo for the hair. Filed Feb. 21, 1961 by Chesebrough-Pond's, Inc., New

York. Claims use since Feb. 7, 1961.

**Free-Flow** — This for liquid drain pipe solvent. Filed Sept. 28, 1959 by Madison Chemical Corp., Maywood, Ill. Claims use since August 1952.

**Trump** — This for all-purpose household detergent. Filed Sept. 28, 1959 by Ultra Chemical Works, Inc., Paterson, N. J. Claims use since Sept. 14, 1959.

**Primeze** — This for soaps and synthetic detergents in liquid and powder forms. Filed Sept. 28, 1959 by Delta Chemical Co., Memphis, Tenn. Claims use since May 21, 1958.

**Centraz** — This for cleaning preparations for use on wall tile, tile joints, floors and toilets. Filed May 4, 1960 by Christy Co., St. Louis, Mo. Claims use since Mar. 1, 1959.

**M. W. Sergeant** — This for bath and toilet soaps, soap powder and hair shampoo. Filed Aug. 4, 1960 by Sergeant Acnoid Pharmaceutical Co., Highland Mills, N. Y. Claims use since Aug. 26, 1929.

**Ransohoff** — This for detergents for cleaning metal and metal parts. Filed Sept. 2, 1960 by Ransohoff Co., Hamilton, O. Claims use since Aug. 21, 1959.

**Soft Note** — This for hair shampoo. Filed Oct. 31, 1960 by Mennen Co., Morristown, N. J. Claims use since May 24, 1960.

**Hadox** — This for leather shampoos for various types of women's shoes. Filed Nov. 2, 1960 by Hadox, Inc., Chattanooga, Tenn. Claims use since Dec. 7, 1959.

**Lady Clean** — This for sudsing cleaner, cleanser and detergent. Filed Nov. 7, 1960 by Procter & Gamble Co., Cincinnati. Claims use since April 10, 1957.

**Ship-Shape** — This for detergent compounds for cleaning dairy and poultry equipment, and for general household and industrial uses. Filed Dec. 20, 1960 by King Research, Inc., Brooklyn. Claims use since Oct. 31, 1960.

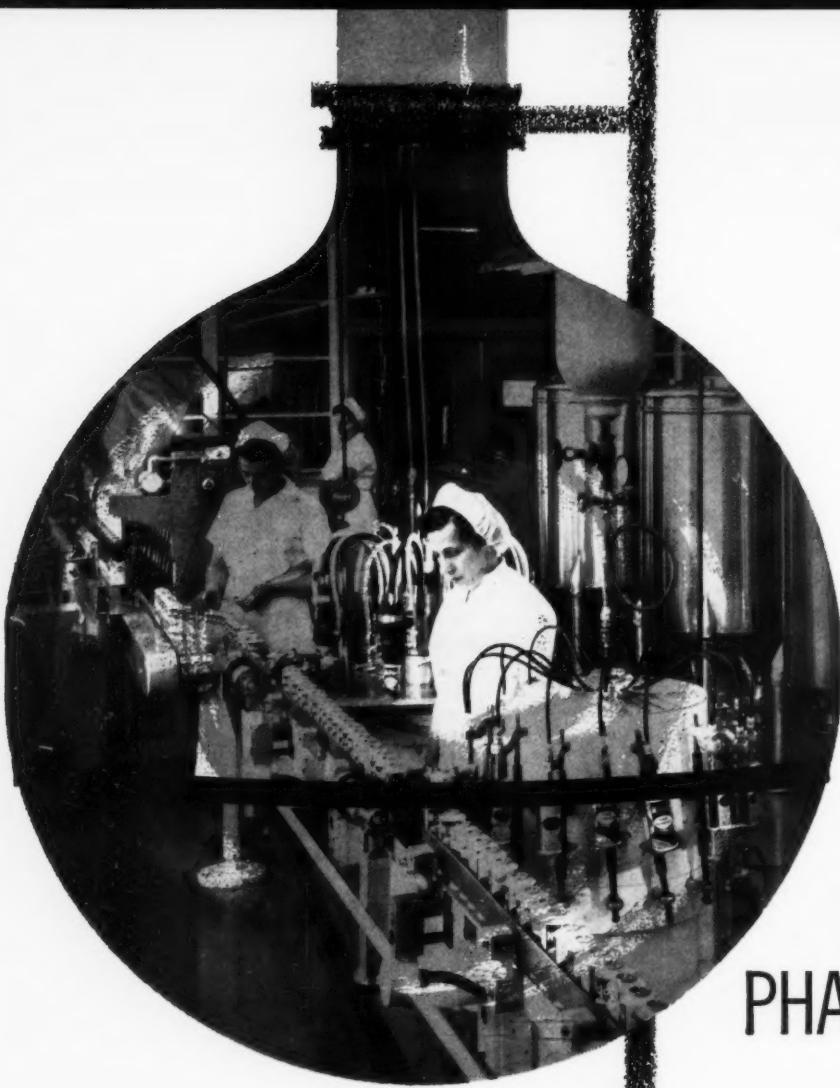
**Marasheen** — This for cleaning fluid for sheet binders of plastic material. Filed Feb. 16, 1961 by Marador Corp., Los Angeles, Calif. Claims use since Nov. 11, 1960.

**Reslabs** — This for liquid detergent for general commercial cleaning and grease and detergent removal. Filed Feb. 23, 1961 by Reslabs, Inc., Chicago. Claims use since 1957.

**Grand** — This for laundry starch. Filed Dec. 27, 1960 by Grand Union Co., East Paterson, N. J. Claims use since July 6, 1960.

**Diaper Magic** — This for composition for deodorizing, sanitizing, and whitening diapers. Filed Feb. 16, 1961 by Economics Laboratory, Inc., St. Paul, Minn. Claims use since Sept. 30, 1960.

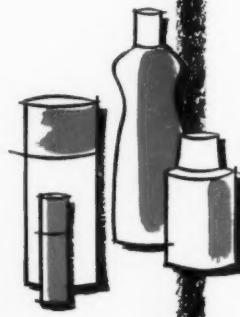
**Poli-Kleen** — This for liquid cleaner for venetian blinds, automobiles, plastic seat covers, plastic tile, woodwork and the like. Filed Sept. 28, 1959 by Kaufman Window Shade Co., Kansas City, Mo. Claims use since July 28, 1959.



# COMPLETELY GLASS ENCLOSED AEROSOL FILLING LINES FOR COSMETIC PHARMACEUTICAL AND FOOD PRODUCTS

As the nation's largest aerosol loader and custom filler of conventional packages, Stalfort offers a high-speed liquid fill line, with a rated capacity of 15,000 glass or high-density polyethylene bottles per hour. A complete line of household chemicals—waxes, cleaners, polishes, detergents — for private label packaging is also available.

**SPECIALISTS IN  
THE FILLING OF  
ALL TYPES OF  
CONTAINERS WITH  
ALL TYPES OF  
PRODUCTS**



An all stainless-steel, high-speed line for loading aerosol products, even powder, under sanitary conditions, is in operation at our modern Pressure-Pak plant. Such things as soluble spices and flavorings, syrups, toppings, sauces, meat tenderizers, etc. can be filled for test or production runs.

JOHN C.  
**STALFORT**  
AND SONS, INC.

321 W. Pratt St., Baltimore 1, Md.  
Manufacturing Chemists Since 1868

# pressure packaging

## J. Freedman Wins Aerosol Golf Tournament

**J** FREEDMAN, Clairol, Inc., New York, won first low gross, with an 82, and thereby won the 7th Annual Aerosol Industry Invitational Golf Tournament. Mr. Freedman wins possession for one year of the tournament's trophy, which has been renamed the Stanley Kreps Memorial Trophy. This year's golf tournament was held August 8, at Winged Foot Golf Club, Mamaroneck, N. Y. Close to 140 persons were present for dinner, and about 112 of these played in the tournament.

Other guests among the tournament winners were G. Moriarity of John H. Breck, Inc., Springfield, Mass., who won low net with a score of 66 (84-16). A four-way tie for first low Calloway was won by E. J. Correll of Stanley Home Products Co., Easthampton, Mass. First in the kickers was W. Peters, International Paper Co., New York. Louis Marvinney, J. B. Williams Co., Cranford, N.J., shot an 83 and won second low gross. F. M. Deakins of Glenbrook Laboratories, New York, had second low net with a 72. Second low Calloway was won by William Condon, Hot Shot Quality Products, Inc., Memphis, Tenn. Thomas Hogan, Clairol, Inc., New York, was second in the kickers. Harvey White, Puritan Aerosol Corp., Boston, hit the longest driver (235 yards); J. O'Reilly, American Can Co., New York was closest to the pin on the 3rd hole (5'2"); Rudy Beers, Aero-Chem Fillers, Bridgeport, Conn., had the most number of strokes on one hole (24), and D. Rubenfeld, Sun-Lac, Inc., Clark, N. J., had the highest score (139).

Winners among the hosts included James O'Neill of Crown Cork & Seal Co., Philadelphia, who won first low gross with a score of

80. Richard Monahan, Oil Equipment Laboratories, Inc., Elizabeth, N. J., won first low net with a score of 68 (101-33), and Thomas Morgan, *Soap and Chemical Specialties* magazine had first low Calloway with a 74 (83-9).

The man for whom the Aerosol Industry Invitational Golf Tournament trophy has been renamed, Stanley I. Kreps, was regional manager of can sales for Crown Cork & Seal Co., Philadelphia at the time of his death on Jan. 11, 1961. Mr. Kreps, who joined Crown in August, 1937, pioneered the sale of aerosol cans. During his career with Crown, he held several managerial positions. The trophy renamed in his honor was donated by Robert H. Abplanalp, of Precision Valve Corp., Yonkers, N. Y., one of the early hosts for the tournament. A replicate in miniature of the trophy is also given to each winner for permanent possession. Previous tournament winners include Richard Gelb, Clairol, Inc., 1960; and Sal Noto, Sun-Lac, 1959.

Hosts for this year's tournament included:

*Aerosol Age*, General Chemical Division of Allied Chemical Corp.; American Can Co.; Bridgeport Metal Goods, Inc.; Clayton Corp.; Continental Can Co.; Crown Cork & Seal Co.; E. I. du Pont de Nemours & Co.; Emson Research Co.; Foster Forbes Glass Co.; Metal Fabrications, Inc.; Oil Equipment Laboratories; Owens-Illinois Glass Co.; Peerless Tube Co.; Precision Valve Corp.; Risdon Manufacturing Co.; A. Schrader's Sons (Division of Scovill Manufacturing Co.); *Soap and Chemical Specialties* magazine, VCA, Inc., and Wheaton Plasti-Cote Co.

The committee for this year's tournament was composed of Don Tuttle, Risdon Valve; Wayne Dorland, *Aerosol Age*; James O'Neill, Crown Cork; Curt Hollopeter, Owens-Illinois; Charles Wirth, du Pont; Phil Sagarin,

VCA, and Rubin Potoff, Metal Fabrications.

## New Aerosol Packager

Pressure Products Co., West Chester, Pa., and Canton Chemical Corp., Wilmington, Del., have merged under the name of Pressure Products Co., division of nu-Aero Corp., it was announced recently.

Canton Chemical Co., formerly manufactured and sold cleaning and polishing products to the automotive trade, and Pressure Products Co., produced and sold pressure packaged products to the automotive field.

The first new product resulting from the merger is a starting ether for lawn mowers called "EZ Start," packaged in aerosol cans.

## Puritan Names Laauwe

Robert H. Laauwe has been appointed New York regional sales manager for Puritan Aerosol Corp., Boston, Mass., it was announced earlier this month. Prior to serving as an Air Force officer during the Korean War, Mr. Laauwe was associated with Atlas Chemical Industries, Inc., Wilmington, Del., as a technical representative. Most recently he held

(Turn to Page 158)

Robert H. Laauwe



# Aerosol Awards...

The tenth annual AEROSOL PACKAGE CONTEST will be held in conjunction with the 48th Annual Meeting of the

## CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION

ROOSEVELT HOTEL, NEW YORK

DECEMBER 4-6, 1961

... will include judging and selecting of best aerosol packages of the year

The aerosol package competition and awards will be divided into fifteen classes as follows:

1. Automotive products.
2. Insecticides, repellents, moth proofers.
3. Room deodorants.
4. Paints, enamels, other protective coatings; paint remover.
5. Other household products — polishes, glass cleaner, rug shampoo, starch, water repellent, snow, etc.
6. Shave products.
7. Hair preparations.
8. Perfumes, colognes, toilet waters.
9. Other personal products — shampoo, body deodorants, dentifrices, sun tan oil, etc.
10. Food products.
11. Horticultural products.
12. Medicinal and pharmaceutical products.
13. Veterinary and pet products.
14. Industrial products — lubricants, belt dressings, stencil inks, etc.
15. Foreign products.

... a top award for "best in the show" will also be made

### Rules of the contest:

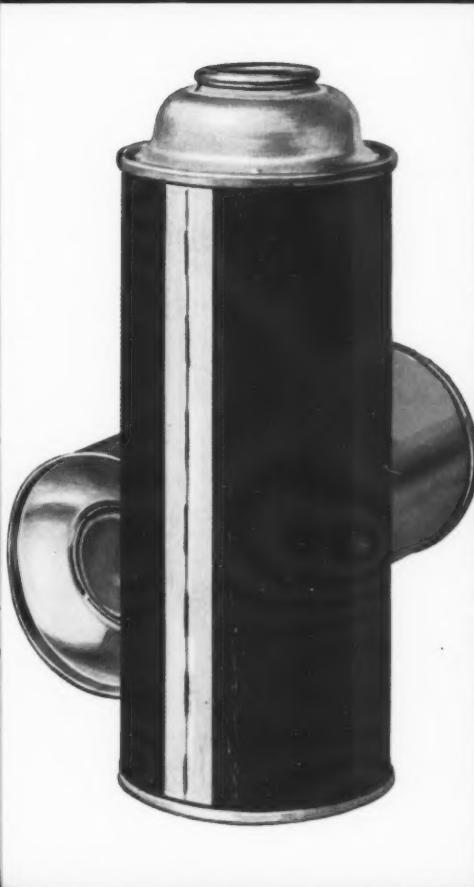
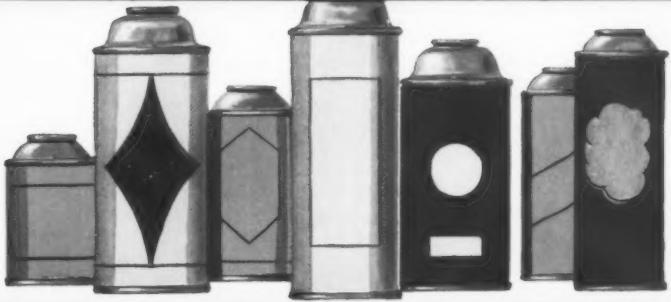
1. Awards will be made on the basis of general sales appeal of the complete package. The awards are given for package design only and do not constitute endorsement of the product, container, valve, label, or other part of the package, nor do they constitute a determination that the package or labeling meets applicable state or federal laws or regulations.
2. All entries must be made in the name of the brand owner or marketer. Products must have been freely offered for sale prior to September 1, 1961.
3. Entries will close October 15, 1961. All entries should be sent as soon after September 1 as possible to the Committee at the CSMA office, and should comprise one completely assembled empty container with attached tag showing (a) name and address of brand owner; (b) class in which entry is made by number noted above. Send one completed entry blank for each package entered. (Entry blanks will be sent promptly to anyone on request.)
4. Entries may be made in as many classes as desired by the same marketer or brand owner.
5. Entries are open to any brand owner anywhere and are not restricted to members of CSMA. There are no entry fees or other charges to entrants. The committee reserves the right to reclassify any entry prior to judging and to reject any entry it deems advisable.
6. Best packages will be selected in fifteen classes noted above and a "best package in the show" will be chosen. Judging will be by a group of qualified persons. Their decisions will be final.

For information and entry blanks, write to  
**AEROSOL PACKAGE AWARDS COMMITTEE**  
Chemical Specialties Manufacturers Association  
50 East 41st St., New York 17, N. Y.

MAKE PLANS FOR YOUR ENTRIES NOW!



# NO MATTER HOW YOU LOOK AT IT CONTINENTAL HAS THE RIGHT AEROSOL CAN FOR YOU



Bottom, top and all around, Continental's aerosol cans have features you've been looking for:

- Dimpled nibs on the dome allow for a less expensive, single shell overcap.
- Recessed bottom for stacking means firm, attractive displays... neater shelving... easy storage
- Tri-com solder now makes for a strong side seam inside and out.
- Pre-soldered striping provides superior product protection.

Continental was first in 1947 with low pressure aerosols, and is still leading the field in design ingenuity and production capability. If you're looking to increase your sales through the use of aerosol cans, call Continental. Our Technical Center in Chicago, staffed by top-flight engineers and researchers, will work with you to develop the aerosol can that's right for your product. Added service like this is why—Whatever you package, whatever you produce, Continental has the right container for you.



CONTINENTAL  
CAN COMPANY

Eastern Division: 633 Third Ave., New York 17  
Central Division: 135 S. LaSalle St., Chicago 3  
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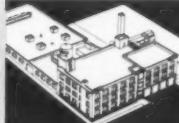


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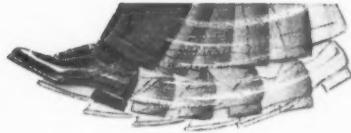
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(From Page 153)

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Mr. Laauwe is a member of The Salesmen's Association of the American Chemical Industry, Inc., Society of Cosmetic Chemists, Toilet Goods Association and the Society of American Perfumers.

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**Aerosol Package Contest**

The Tenth Annual Aerosol Package Contest will be held in conjunction with the 48th annual meeting of the Chemical Specialties Manufacturers Association in the Roosevelt Hotel, New York, December 4-6, 1961. Deadline for entries is Oct. 15.

**Aerosol Congress in Switzerland, Oct. 3-8**

THE latest developments in aerosol technology on the continent of Europe will be discussed during the Third International Aerosol Congress in Lucerne, Switzerland, Oct. 3-8. This year's congress, to be held in Lucerne's Art and Congress Hall, will feature for the first time an international aerosol exhibition and an aerosol packaging competition, sponsored by the Federation of European Aerosol Associations (F.E.A.) Winner of the packaging competition will receive the "aerosol star."

In addition to leading European aerosol experts, John J. Sciarra, professor of pharmaceutical chemistry at the College of Pharmacy, St. John's University, Jamaica, N.Y., only American speaker, will discuss the "Development of Pharmaceutical and Medicinal Aerosols in the United States." Dr. Sciarra will speak on Oct. 6, second day of the two days set aside for technical sessions.

The six-day congress gets under way the afternoon of Oct. 3, when the F.E.A. holds a regular meeting of its delegates. This is to be followed by the judging of the aerosol packaging competition.

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"A New Method of Spray Particle Size Measurement", by a speaker from Pechiney Co., Paris;

"Valve Characteristics", by H. Meuresch, Precision Valve International, S.A., Zurich;

"Weighing Problems in Aerosol Filling", by B. Medlundh, Skandinaviska Aerosol, AB, Stockholm-Solna, Sweden.

The all day technical program scheduled for Friday, Oct. 6, will consist of the following:

"How Aerosol Constituents Affect Physical Structure of Homogenized Food Products", by C. Gidley, Battelle Memorial Institute, Geneva, Switzerland; "Flammability Tests for Aerosols", by W. Roth and U. Ferrati, J. R. Geigy, AG, Basle, to be presented by Dr. Roth;

"Development of Pharmaceutical and Medicinal Aerosols in the United States", by J. J. Sciarra, St. John's University, New York;

"Aerosols in Italy", by R. Scribani Rossi, Bombrini Parodi-Delfino, S.p.A., Rome, Italy;

"The Formulation of Aerosol Paints and Lacquers", by C. A. Southby, Aerosol Packaging Co., Bracknell, Berks, England;

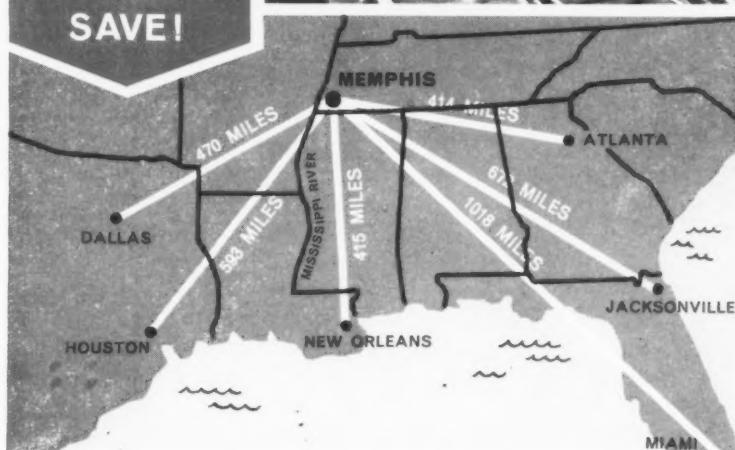
"Inks and Varnishes for Aerosol Containers", by Z. E. Kozicki, Vernicolor, AG, Meilen/Zurich.

The papers will be followed by a discussion and question and answer period under the chairmanship of F. Schmutz, Aerosol-Service, AG, Riehen Basle.

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## New Aerosol Valve for Anti-Perspirants

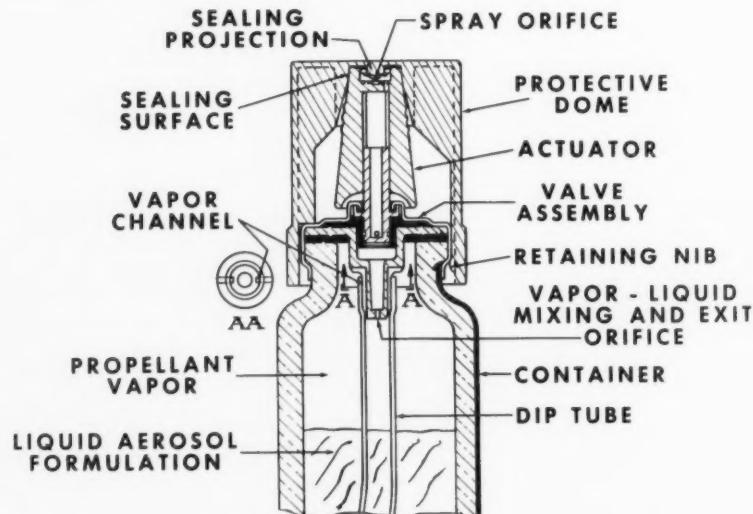
THE development of a new aerosol valve and closure that make possible the successful packaging of anti-perspirants in pressure packages was announced last month by Risdon Manufacturing Co., Naugatuck, Conn. Risdon claims to have developed a system

to solve the problem that has heretofore plagued the packaging of anti-perspirants in spray dispensers. According to this Connecticut valve manufacturer, whenever anti-perspirants have been tried in aerosol packages the aluminum salts vital to virtually all anti-per-

New non-metallic valve and self-sealing cap of Risdon Manufacturing Co. can be used with all kinds of containers to pressure package antiperspirants and other products that tend to crystallize. As shown in photograph, "Vapor Mix" valve and "Seal Dome" closure can be used with glass, aluminum, stainless steel, plastic and all other containers having openings 20mm or one-inch in diameter.



Drawing of new non-metallic valve and self-sealing cap just developed by Risdon Manufacturing Co., which make possible aerosol packaging of anti-perspirants. Designed for use with all kinds of containers, new "Vapor Mix" valve and "Seal Dome" closure minimize possibilities of corrosion and clogging, two factors which have heretofore hindered aerosol packaging of anti-perspirants. Vapor channels on either side of nylon valve cup allow a minute supplementary amount of propellant to enter dip tube at top. This results in additional atomization of product causing an unusually fine spray; also reduces chilling effect of aerosol.



spirants have crystallized and clogged the aerosol valve.

Risdon researchers, led by Walter C. Beard, Jr., research director, have developed a non-metallic valve and a self-sealing cap which acts as a "cork" for the aerosol package between uses. This system is claimed to minimize clogging due to drying out of aluminum salts. Features of this new development are covered by patents and patents pending.

The valve and closure have been designed for use with all containers: glass, aluminum, stainless steel, plastic, having openings of 20 mm or one-inch in diameter. Metal containers for aluminum salt based formulations would have to be protected against corrosion to insure performance.

The potential market and demand for this packaging system appear to be considerable, according to Donald S. Tuttle, Jr., vice-president of Risdon. In 1959, consumers spent \$95 200,000 on more than 93,000,000 packages of all kinds of deodorants and anti-perspirants. The ease of applying an aerosol-packaged spray, compared with some of the conventional forms, makes the spray package particularly desirable for underarm use, Mr. Tuttle said. Creams, liquids, squeeze bottles, sticks, roll-ons and pads are some of the forms in which anti-perspirants and deodorants are now available.

The new Risdon "Seal Dome" closure creates a double seal to prevent the aluminum salts from drying up and clogging the valve and actuator. From the outside, the ribbed plastic cap looks like any other. The inside, however, is specially constructed to provide sealing action. The cap's interior: 1.) is tapered to seal against the side of the vertical toggle-type "Micro-Mist" mechanical breakup actuator; 2.) has a projection at the top which fits into the terminal orifice of the actuator and seals it from the air; 3.) has

(Turn to Page 164)

# New Propellant Blending System

**Greater accuracy in mixing of aerosol propellant concentrate obtained by Associated Brands using new blending technique.**

Dominic Delia, (right), plant manager of Associated Brands, Inc., checks specific gravity of blended propellant and concentrate in mixing tanks. Frank DeVico of Associated's engineering staff, who helped to develop new system, looks on.

**I**NSTALLATION of a new system for blending propellant and concentrate that provides a more accurate mixture of these ingredients than existing filling techniques has been announced by Associated Brands, Inc., Brooklyn contract aerosol loaders.

In this new system, precise ratios of propellant and concentrate are blended in a mixing

chamber, before they are passed on to the filling line and bowl. This permits one-stage cold filling of pressurized products.

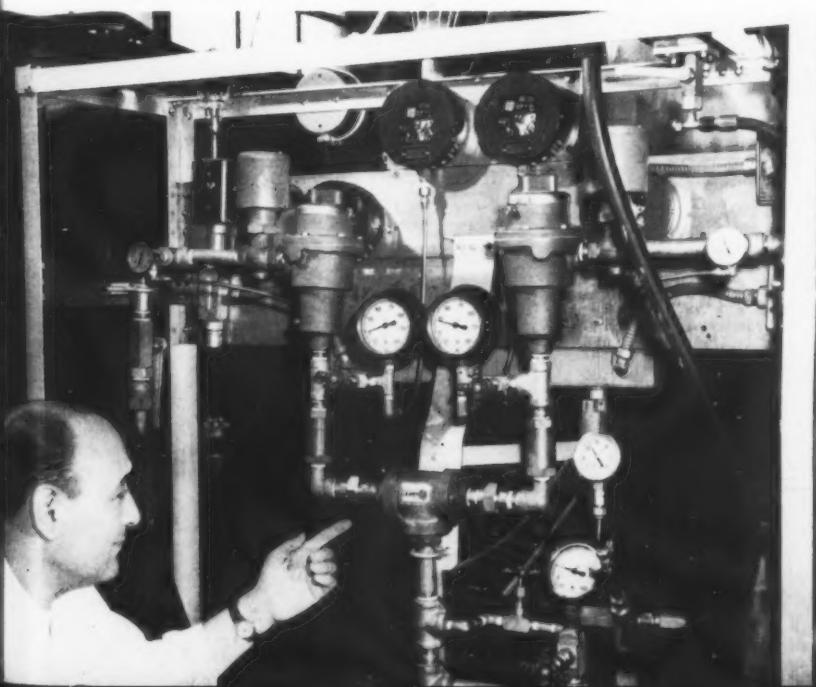
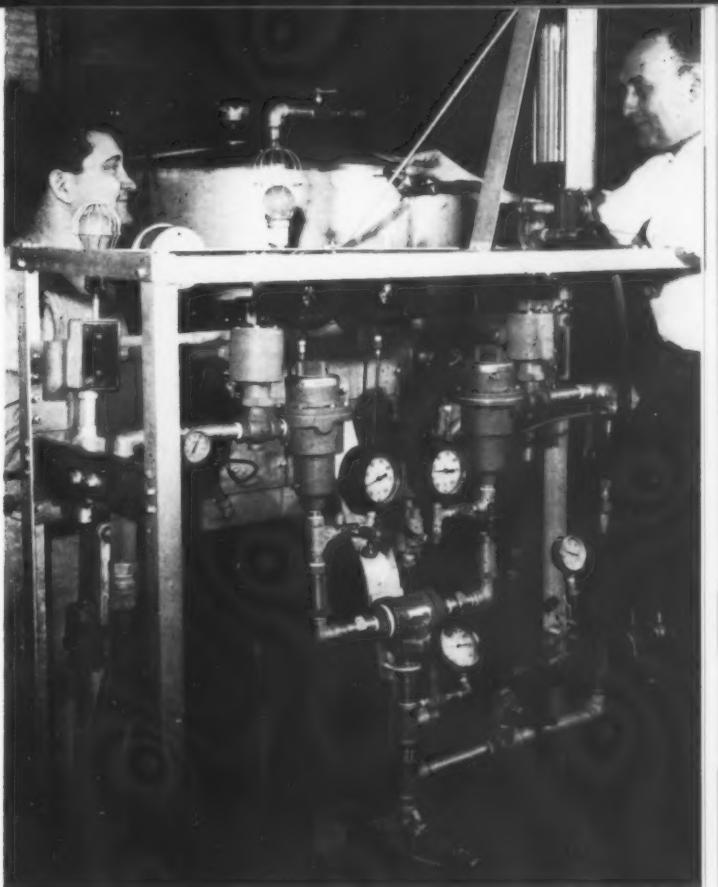
An important benefit of blending the precise amount of

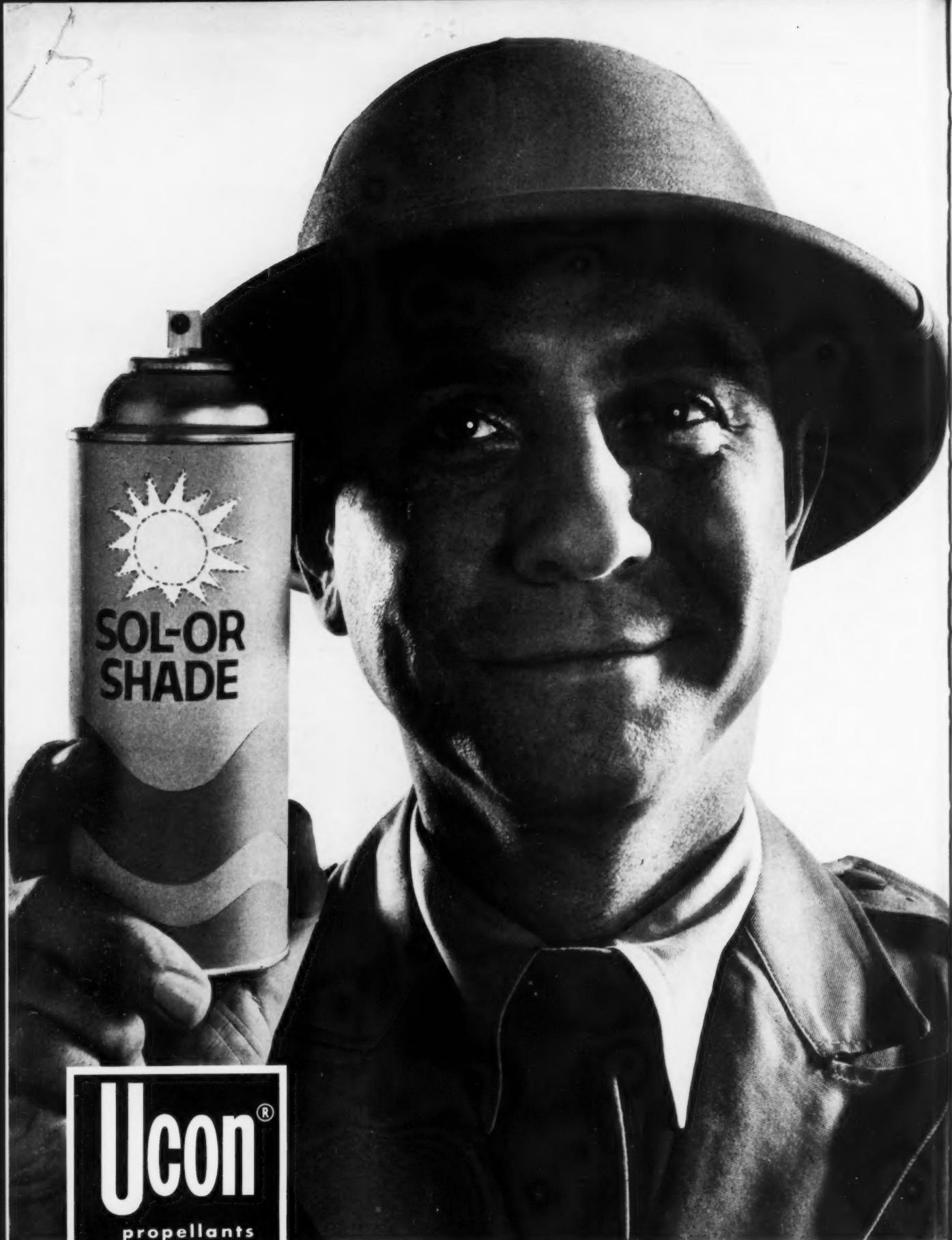
Key to the new system of blending propellant and concentrate at Associated Brands are two Kates regulator valves. Here, Dominic Delia checks valves, which operate only when both inlet line pressures have reached their pre-set points, assuring a proper blending ratio. Valves control flow and pressure at which propellant and concentrate are metered into mixing tank. Valves are calibrated to give accuracies of better than .025 per cent of setting.

propellant and concentrate for loading into the aerosol container is a more uniform end product than that which can be achieved by most two-stage filling operations in use today. This greater efficiency is achieved because, in this new one-stage fill there are only half as many filling bowls, nozzles and electronic timers to synchronize. Associated also has found that propellant loss is cut to a minimum, and that nozzle openings remain clean and free from ice formation giving them a more accurate filling stream.

Another advantage is that a blend of concentrate and propellant can be run into the filling line at a temperature of from 15 to 20 degrees F. higher than propellant alone. This permits a more effective use of available refrigeration capacity.

This means that with similar refrigeration capacity and line operation, more containers per minute can be filled when propellants and concentrate are blended than when the materials are fed





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Frank DeVico, a member of Associated Brands' engineering staff, checks hydrometer to compare specific gravity of blended materials with charts which have been compiled to show correct specific gravity for each component at the indicated temperature.

into the line from conventional systems.

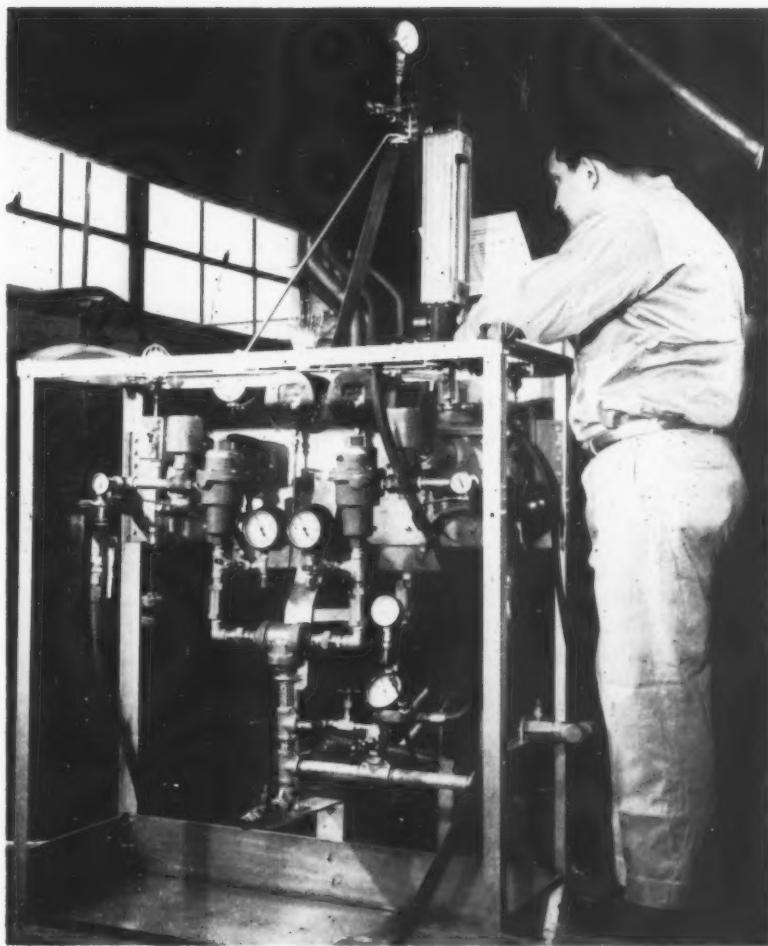
Metering of the propellant and concentrate is accomplished by controlling their flow and pressure through two Kates regulator valves that are calibrated to give accuracies of better than 0.25 per cent of set point. The materials are then passed through an inline mixing chamber before entering the holding tank.

The entire operation is fully automatic and self-sustaining. Pumps are started and cut off by a low-high cutoff in the holding tank, and metering through the regulator valves start only when both inlet line pressures have reached their pre-set points, at which time two solenoid valves open and processing begins.

Should the supply of either component deplete itself, the pumping pressure of that component drops immediately, thus stopping the blending operation. Therefore, there is no chance of either component being metered by itself.

Thermometers constantly register the temperature of both

New method of blending propellant and concentrate before they are passed on to filling line at Associated Brands permits one-stage cold-filling of pressurized products. Bowl at right loads precise amount of material into container, while bowl at left, necessary in two-stage filling, is inoperative.



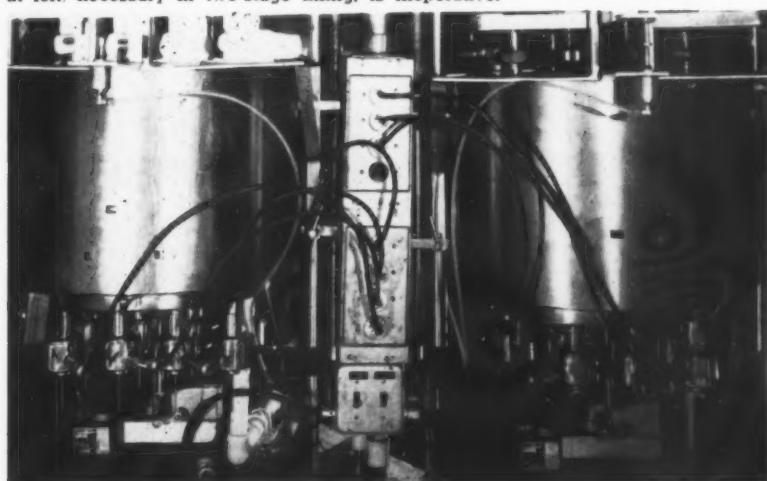
liquids, and charts have been worked out that show the correct specific gravity for each component at the indicated temperature. A

continuous S. G. reading is visible through a Fischer Porter meter giving the operator an instantaneous check on the process. A cross-check is maintained by taking similar S. G. readings on the blended components as well.

This new system was developed for Associated Brands by its engineering staff of Dominick Caldiero, Frank DeVico, and Joe Patino under the direction of Dominic Delia, plant manager.

A manufacturer of cosmetic products for more than forty years, Associated Brands has been filling aerosol products since 1950. Its modern facilities are located at 50 Wallabout Street, Brooklyn 11, New York.

Approximately 190,000 square feet of floor space is devoted to manufacturing area. There is 90,000 square feet of warehouse space. ■



(From Page 160)

ribs along the inner sides of the cap's interior features a "cork action" which prevents air from reaching the actuator's orifice when the package is not in use.

Since the actuator is the toggle-type which can only be actuated by pressing the side, it cannot be moved accidentally when the cap is put in place, according to Risdon.

The "Vapor Mix" valve has two tiny channels on either side of the nylon valve cup that fits into the dip tube. These channels allow a minute supplementary amount of propellant to enter the dip tube at the top. When the actuator is pressed, this added propellant in vapor form mixes with the liquified solution of product and propellant that is forced up through the dip tube in the normal way. The additional atomization that results is responsible for an unusually fine spray and also reduces the chilling effect of the aerosol.

This is because a smaller amount of the product, which creates the cooling effect by evaporating on the skin, escapes. Most of the propellant itself dissipates as soon as it reaches the air.

The new "Seal Dome" closure should be equally effective when used with adhesives and any other formulations that tend to dry out and clog an aerosol valve, according to Mr. Beard.



#### Plasti-Kote Prediction

A spray paint sales rise to \$7,500,000 in 1961, as compared with \$5,000,000 in 1960 and \$3,000,000 in 1959 has been predicted by Plasti-Kote, Inc., Cleveland aerosol paint manufacturer. The basis for the prediction is that an estimated 17 per cent of the population knows about the availability of spray paint, contrasted with 10 per cent a year ago. The company further estimates sales will rise more than 100 per cent in the next five years.

Plasti-Kote will soon move into a new 105,000 square foot plant in Medina, O., said to have an annual capacity of 20 million aerosol paint cans.



#### "Peerasol" Trade Name

Peerless Tube Co., Bloomfield, N. J., has received registration #710,728 for the trade name "Peerasol," applied to its one-piece, extruded aluminum aerosol containers, it was announced recently.

The containers have necks that are "beaded" or curled inward by a patented process to give a natural holding action against the valve cup seat, which is interlocked with a curled neck and adhered with sealing compounds. Presently 10 sizes are available, from one-half ounce to four ounce capacity. External lithographic printing of up to four colors can be applied over the base coat, and an increasing number of resin compound internal liners are available, the company states.

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**COMMERCIAL CAN CORPORATION, Newark, N. J.  
STANDARD CAN CORP., Leetsdale, Pa.**

# aerosol patents

**No. 2,991,044. Aerosol Valve Assembly**, patented by Joseph Brieche, New Canaan, Conn., assignor to Scovill Manufacturing Co., Waterbury, Conn. Revealed is an aerosol dispensing valve assembly, comprising a tubular housing having a valve chamber, an elastic sealing washer seating on the top of the housing, a container closure member having a central tubular part embracing the periphery of the washer and the periphery of the housing at the top thereof and holding said parts in fluid-tight engagement, a J-shaped open-ended tubular valve member in said chamber with the bight of the J innermost, the arms of said J-shaped member being substantially parallel and of unequal length with the long arm extending outwardly through and slidably in an opening in the washer with a fluid tight fit, a spring in the valve chamber normally biasing the valve member outwardly to seat the open end of the short arm into sealing engagement with the washer eccentrically to the axis of the long arm, and the container closure member having a flange overlying the seating position of the short arm on the washer and terminating in encircling relation to the long arm.

**No. 2,991,039. Detachable Mounting for Aerosol Cans**, patented by Francis M. Aimes, Chatham, N. Y. This patent covers a bracket of the character described, defined by top, back and side walls, the top wall having a depending sleeve, the lower end of the sleeve having a peripheral recess, a coil spring arranged in said recess, means on the sleeve retaining said spring against displacement from said sleeve, the coils of the spring being of greater diameter than the diameter of said sleeve to form, at the periphery of the spring, circumferential gripper portions for engagement with an article coupled with the bracket, and the coils of the spring being adapted to be flexed in engagement of an article with said spring.

**No. 2,991,917. Metering Valve Assembly Having Stepped-Back Plunger**, patented by Lawrence T. Ward, Northampton County, Pa., assignor to V. C. A., Inc., Bridgeport, Conn. In a metering valve structure for the closure of gas-tight pressure containers of the type including a valve body adapted to be sealed gas-tight to the container and having a channel through said body adapted to lead from the interior to the exterior of the container, a valve plunger slidably mounted in a portion of said channel, means actuatable from the exterior of the container for sliding said plunger, and a first valve means actuated by said plunger normally sealing said channel gas-tight and unsealing when said plunger is moved from a predetermined position in one direction in said channel; the patent

claims the improvement comprising a reservoir cavity in said channel inward of said first valve means and a second valve means actuated by said plunger normally open and sealing said channel gas-tight inward of said cavity when said plunger is moved to a predetermined position in the same direction in said channel; said second valve means being so proportioned and arranged that in passing from its open state to the state of gas-tight seal it passes through an intermediate state of liquid-tight but not gas-tight seal of appreciable duration, said second valve means comprising an annular valve seat of predetermined diameter and a three-step cylindrical rod actuated by the plunger arranged concentric with and normal to said seat with the lowermost cylindrical rod actuated by the plunger arranged concentric with and normal to said seat with the lowermost cylindrical step within said seat when said valve means is open, said lowermost step being of smallest diameter and clearing said seat sufficiently to permit liquid passage between it and said seat, the intermediate step being of intermediate diameter and introduced within said seat by motion of said plunger, the diameter of said intermediate step being such as to afford a gas passage but a liquid closure with said seat, and the outermost step being of largest diameter, the diameter of said outermost step being greater than that of said seat, whereby said outermost step may be pressed into gas-tight seal with said seat by actuation of said plunger.

**No. 2,993,866. Aerosol Glass Cleaner**, patented by Thomas Hunt Vaughn, Tenafly, and William Wendell Wellman, Jersey City, N. J., assignors to Colgate-Palmolive Co., Jersey City. Revealed is a packaged glass cleaner comprising a valved container containing a clear non-flammable solution of 0.1% to 4% by weight of a normally liquid silicone having a viscosity in the ranges of about 10 to 200 centistokes of the formula:



in which R is selected from the group consisting of methyl, ethyl, propyl, butyl, amyl, hexyl, heptyl, octyl, decyl, dodecyl, vinyl, allyl, phenyl, toluyl and naphthyl and n is any integral number, 12 to 35% by weight of an alcohol from the group consisting of ethanol and propanol, 5-25% by weight of a low vapor pressure fluorochloro hydrocarbon selected from the group consisting of trifluorotrichloro ethane and monofluorotrichloromethane, and a higher pressure propellant selected from the group consisting of tetrafluorodichloroethane and difluorodichloromethane constituting substantially the balance of the composition, the pressure in said container being below about 60 lbs. per square inch gauge at 70°F.

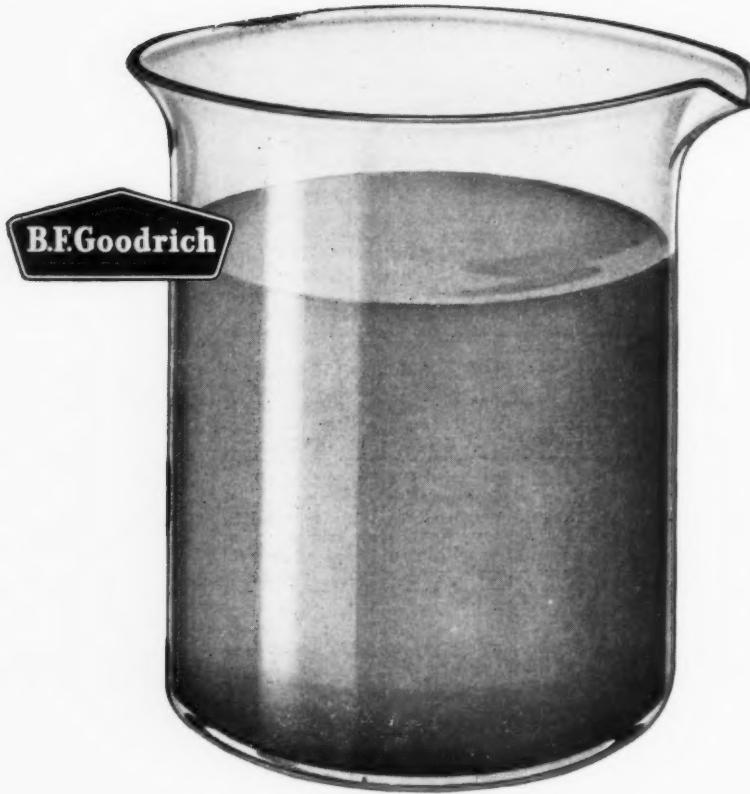
**No. 2,991,896. Reinforced Glass Aerosol Containers**, patented by William S. Glover, Vineland, and Joseph F. West, Millville, N. J., assignors to Wheaton Glass Co., Millville. This patent describes a container adapted to contain a product under pressure to be dispensed in aerosol form comprising a frangible bottle having a discharge opening, said bottle having lines and areas on the exterior surface of normal substantial continuity, a continuous sheath of elastically expansible plastic material freely overlying substantially the entire exterior surface of the bottle and secured to said surface in sealing engagement therewith only adjacent said discharge opening, said bottle having a plurality of spaced localized depressions underlying said sheath and forming therebetween spaced ridges, said ridges interrupting the normal surface continuity of said bottle where provided, to produce substantially point impact locations, said sheath being elastically expansible by said pressure when released upon explosive fracture of the bottle, said sheath having tensile and tear strengths to withstand the initial explosive force and when expanded having tensile and tear strengths operable within the elastic limits of said sheath to confine and retain said pressure and the fracture fragments of the bottle, and said sheath having at least one vent therein operable upon expansion of said sheath to gradually exhaust said pressure therefrom while still retaining therein the fracture fragments of said bottle.

— ★ —

## Cotton Testing Technique

"Cavitonic Cotton Test Spray," used to detect the presence of micro-biological damage in cotton fibers, was developed by Winston H. Reed and Donald S. Buell of General Aerosols, Inc., Shelton, Conn., in corroboration with Jack Compton of the Institute of Textile Technologists, Charlottesville, Va. This testing method will greatly simplify the process for grading bale cotton, it was reported.

The first public demonstration of the new, cotton testing technique was held at the Institute of Textile Technologists, Conference of Cotton Graders, Buyers and Technologists in Charlottesville, Va., July 18, 19.



## How Carbopol improves emulsion stabilization

Carbopol water soluble resins are earning an outstanding reputation for emulsion stabilization. You can also use them to control viscosity. Even the high viscosities are easy to pump or spread. Efficiency is outstanding—as little as 0.1% provides permanent stability.

Recent data on emulsion stabilization shows that Carbopol can also produce suspension results far out of proportion to its effect on viscosity. The analysis of this work proposes—as an independent control mechanism—the concept of "yield value". This rheological concept can be used two ways: either to improve stabilization of present emulsions or to make permanent suspensions, simplifying development of new products. This is achieved by using Carbopol to exceed the critical yield value of the water phase. High viscosity is no longer a requirement.

For complete information about this analysis, or about how Carbopol improves stabilization in other ways, write Dept. PC-5 B.F.Goodrich Chemical Company, 3135 Euclid Avenue, Cleveland 15, Ohio. In Canada: Kitchener, Ontario.

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Water-Soluble Resins

## B.F.Goodrich Chemical Company

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# Production...

EQUIPMENT • MATERIALS • PROCESSING

Automated Soap Quality Control

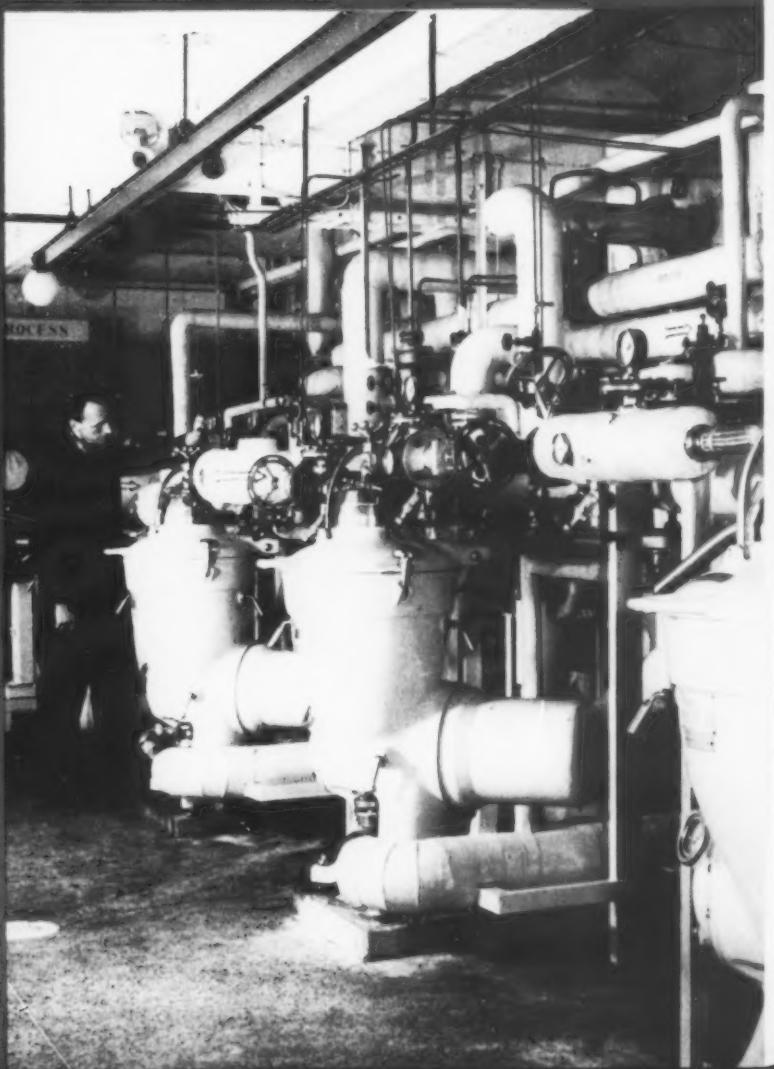
Soap Plant Observer

New Patents

Book Reviews

Bulletins and Equipment

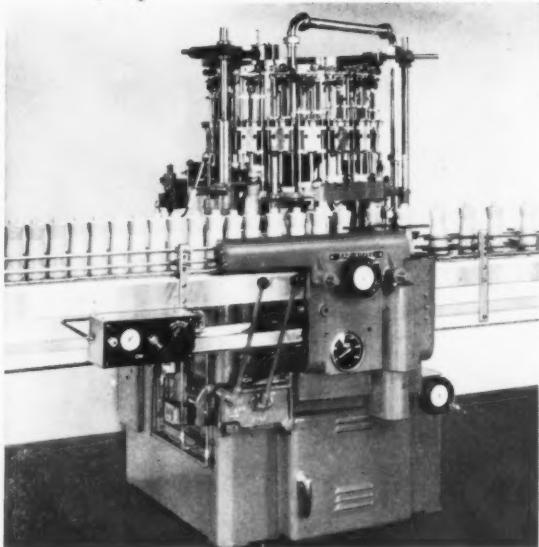
Continuous soap making installation in a Swedish factory is based on "Centripure" process developed by Swedish affiliate of De Laval Separator Co., Poughkeepsie, N. Y. System utilizes interdependence of soap viscosity and electrolyte content for continuous automatic control of the feed of electrolyte in the saponification, washing, and fitting stages. Saponification can be achieved with an exactly preset excess of alkali, ensuring uniform quality of end product. For details of "constant composition" system see article on page 169.



**Have you heard about the**

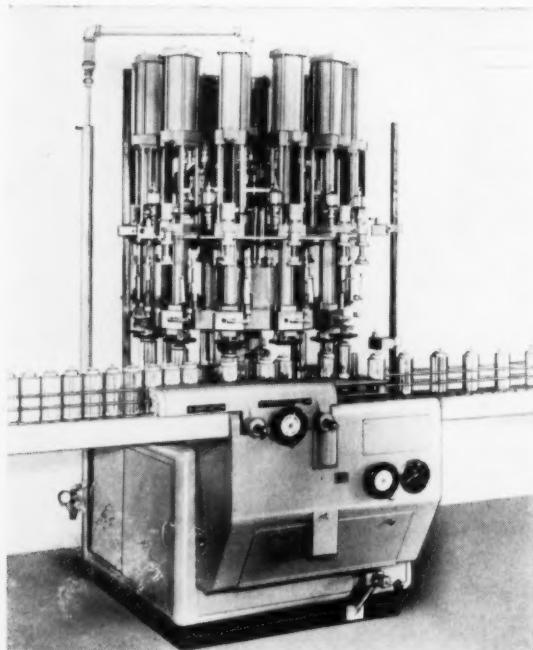
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# PRODUCTION section

## Automated Soap Quality Control

By **Fredrik T. E. Palmquist\***,

A/B Separator\*\*

Stockholm, Sweden

**D**EVELOPMENT of continuous soap manufacturing methods created a need for automatically feeding and proportioning the components. It was no longer convenient to determine electrolyte content by laboratory analysis, as was done in batch manufacturing procedures.

\* Paper presented at 1960 meeting of German Oil Chemists' Society (Deutsche Gesellschaft fuer Fettwissenschaft).

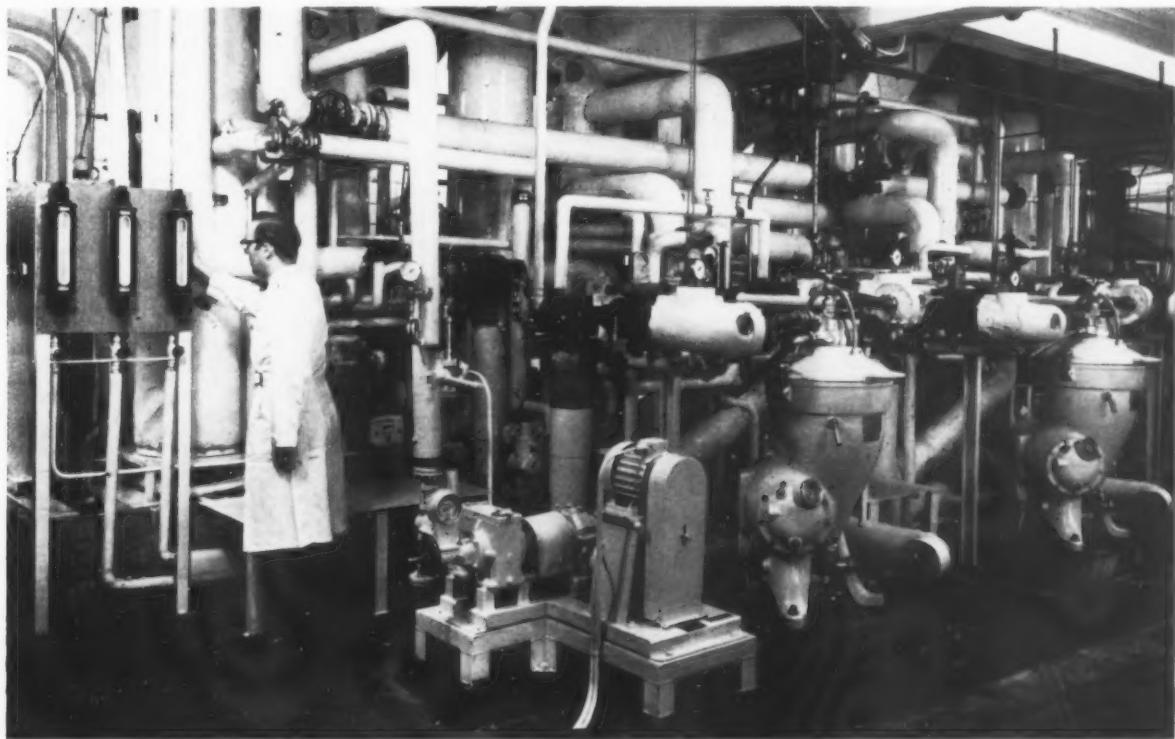
\*\* Affiliate of DeLaval Separator Co., Poughkeepsie, N. Y.

At first, attempts were made to measure the pH value continuously and base automatic control of the plant on this value. This approach presents two problems: (1) the readings are subject to differing interpretations and (2) the pH value is a measure of the hydrogen ion concentration, while the values the soap manufacturer needs to obtain and adjust are the NaOH and NaCl contents.

We have found that viscosity can be used to measure and check the electrolyte content in the soap mass. This is the "constant composition" system, developed in the De Laval organization for use in controlling the continuous "Centripure" soap-manufacturing process.

Viscosity changes regularly with the variations in the soap's electrolyte content. The broad

"Centripure" continuous soap manufacturing plant installed by A/B Separator of Stockholm at a Swedish soap factory. Technician at left inspects sight glass to check on operation, which proceeds under hermetically sealed conditions.



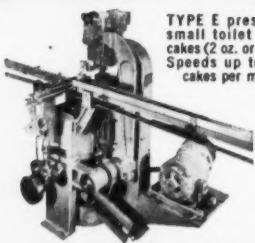
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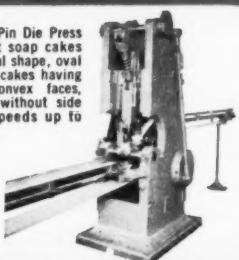
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TYPE E press for small toilet soap cakes (2 oz. or less). Speeds up to 300 cakes per minute.



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TYPE K press for regular and bath toilet size or laundry soap cakes of almost any shape with side band. Duplex model up to 200 cpm. Simplex model (illustrated) 120-140 cpm.

TYPE F press for regular and bath toilet size or laundry soap cakes. Duplex model (illustrated) up to 200 cpm. Triplex model up to 300 cpm.

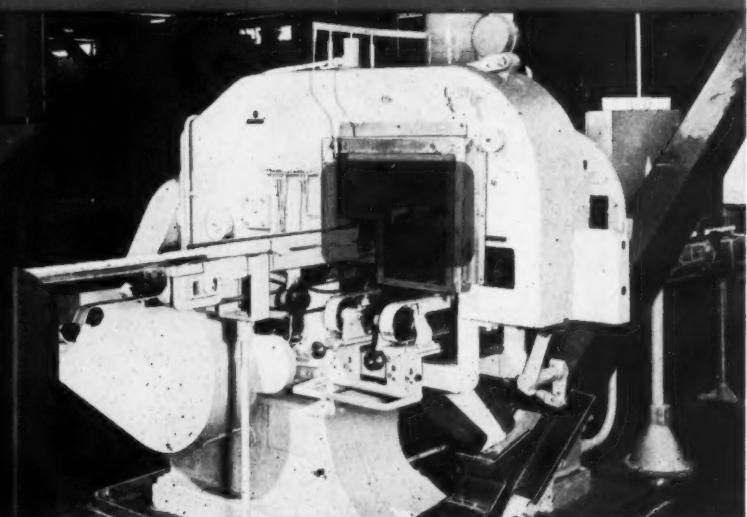
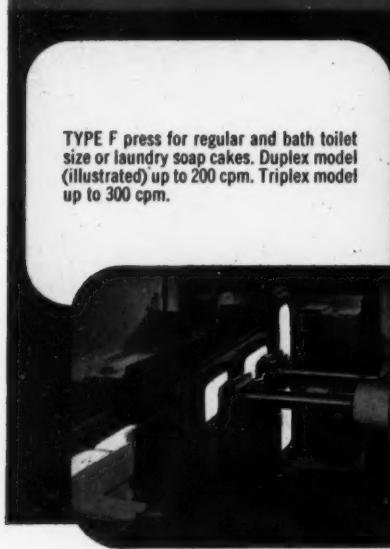


Photo courtesy Colgate-Palmolive Company

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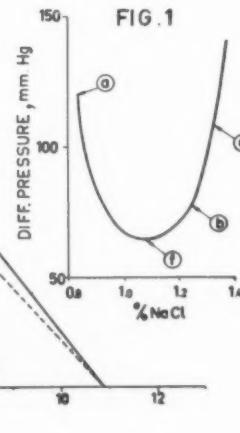
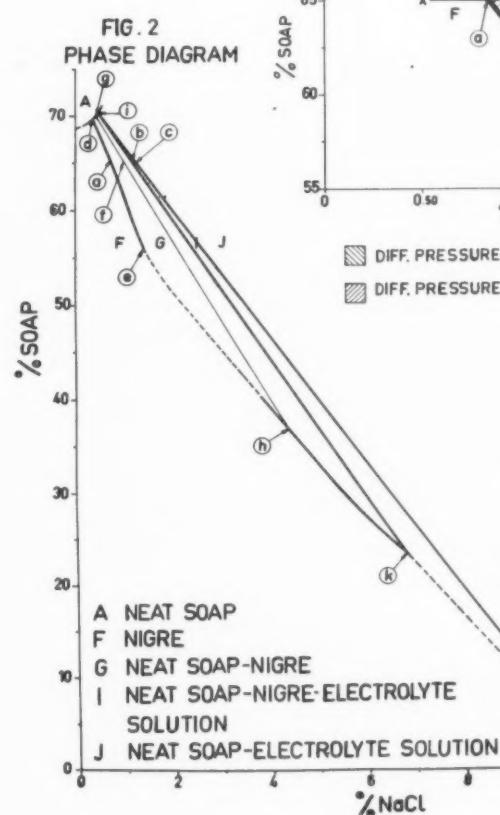
R. A. JONES & COMPANY, INC.  
Soap Presses • Cartoners • Case Packers

range of the variations makes them well-suited for control purposes and can be demonstrated by clearly-defined curves. This control method has been adopted for automatic control of electrolyte feed in the saponification, washing and fitting stages.\*

The fitting operation, automatically controlled by the constant composition system, is based on the following principles and methods of application.

Fig. 1 shows the typical viscosity/electrolyte-content curve for a mixture of 65 per cent soap content, taken in the fitting stage. It is U-shaped and shows a high viscosity (differential pressure) at a

\* See *Soap & Chemical Specialties*, Aug. 1959, p. 135.



## Relationship between viscosity variations and electrolyte content of soap yields key to continuous control of soap composition

low electrolyte content, followed by a minimum at a certain electrolyte content, and then the viscosity rises again at increased electrolyte contents.

In connection with a McBain diagram (see Figures 2 and 3), the latter of which is an enlargement of the zone with a high soap content) it can be seen that an essential part of the curve in Fig. 1 coincides with the fitting zone. This is shown by letters (a), (b) and (c) in Figures 1 and 3. In both figures these letters indicate points of the same soap and

electrolyte content. At point (a) the electrolyte content begins to be sufficient for the fitting to start, i.e., the neat soap is in phase equilibrium with the nigre. This zone covers the distance from (a) to (b). The three-phase zone, where neat soap, nigre and spent lye are in phase equilibrium, is between (b) and (c).

Thus, part of the fitting zone lies inside the left branch of the viscosity/electrolyte-content curve. This part is characterized by the nigres having a low electrolyte content and a high soap content. Neat soap and nigre can be separated from each other only with great difficulty when the representation of the composition is on the left branch. The fitting zone also covers part of the right branch of the curve up to point (b). On this branch, neat soap and nigre are obtained, which can easily be separated from each other, for instance by centrifugal separation. In the three-phase zone (b) - (c), neat soap can also easily be separated from the mixture of nigre and spent lye.

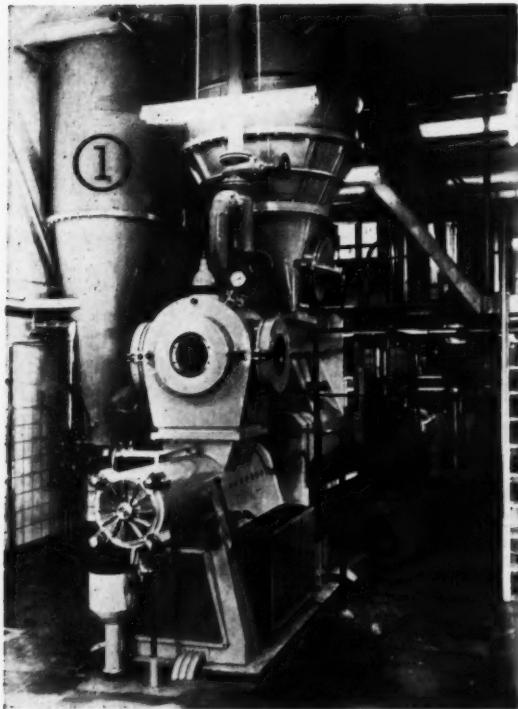
### Automatic Fitting System

Basic features of equipment used to accomplish automatically controlled fitting in the "Centripure" process appear in Fig. 4.

Washed neat soap is introduced into a circulation system consisting of column K, circulation tube C and circulation pump P, which is of a positive displacement type and pumps around a fixed quantity irrespective of the viscosity. Both on the suction and on the delivery side of the circulation pump viscosity-sensitive organs (V) are inserted, which feel the viscosity as a differential pressure. This is indicated by mercury column Hg. The measurements obtained from the viscosity-sensitive

(Turn to Page 175)

# G. MAZZONI, S. P. A.



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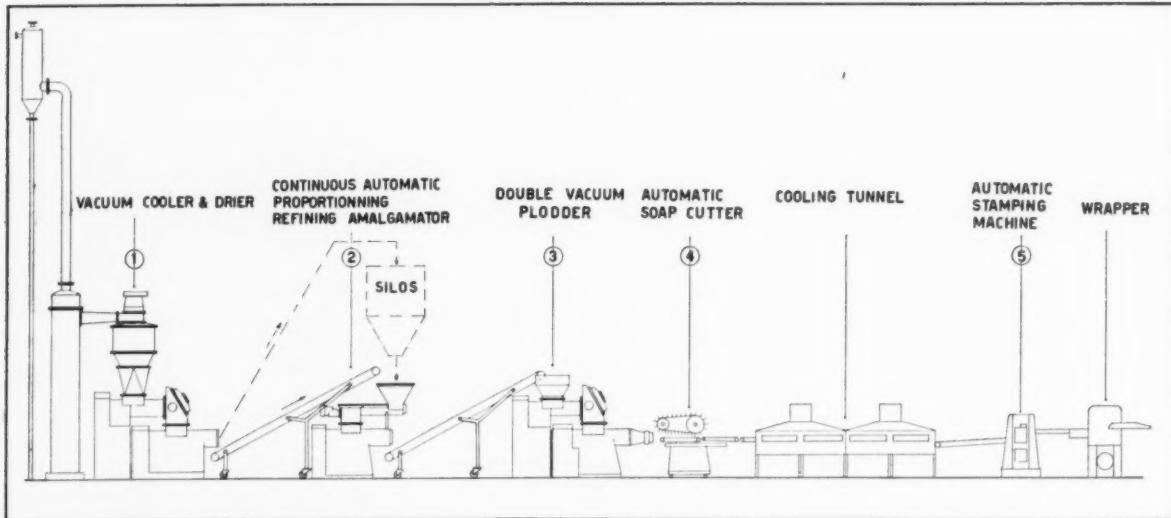
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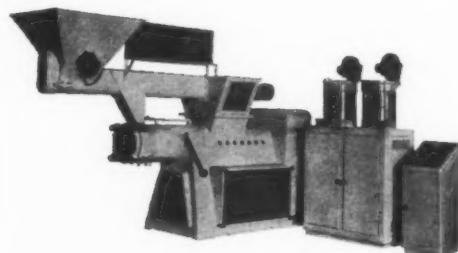
**They are extremely flexible:** The same plant also can manufacture pure or built household soaps, flake and powder dried base, etc. from 35 to 84% T.F.A. and more.

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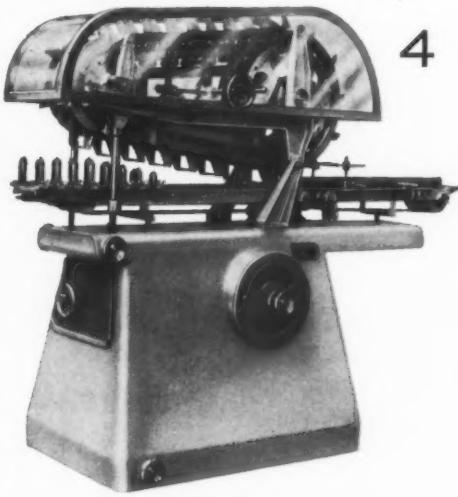
Layout of our continuous toilet soap line. Fully continuous or batch processing possible using chips silos. Our line automatically produces fully refined, first class toilet soap with no roll mills. The individual machines that are employed in the above sketch appear on this and the facing page. A complete line or individual units are available with production capacities of 250 to 1500 Kgs. per hour.

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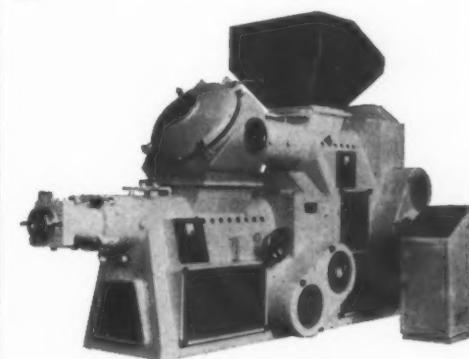
Units shown on this page are  
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appear as numbered in produc-  
tion line diagram on facing page.

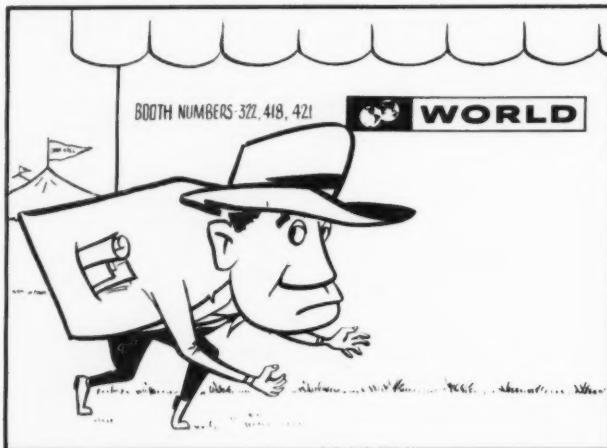


AUTOMATIC SOAP STAMPING MACHINE

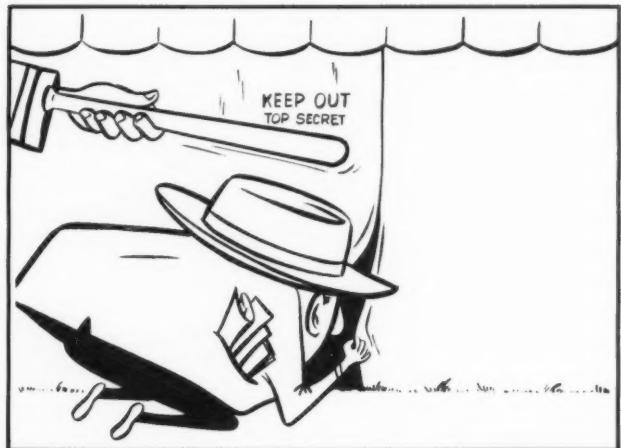
Type "St-S" stamping speed up to 125 per minute.  
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(From Page 171)

organs are registered by instrument I. This instrument controls the procedure and guides regulation valve RV.

PP is the proportionizing pump for fitting electrolyte, which pumps a preset quantity of electrolyte. The quantity depends on the soap content (fatty-acid content) at which the fitting is to be done. This pump is fed two components, viz., strong electrolyte and water. In the feed pipe for strong electrolyte there are no limitations, but the feed of water is controlled by regulating valve RV. Thus the extreme values of the regulation are such that regulating valve RV is either fully open and only water is fed to pump PP, or RV is fully closed, and then only strong electrolyte is fed to the pump. All intermediate positions between these extremes are also possible. Thus it is possible to feed a predetermined quantity of electrolyte with a concentration of between 0 per cent (i.e., 100 per cent water) and the concentration of the strong electrolyte.

When the index of instrument I is preset for operation at a point on the right-hand branch of the control curve corresponding to the desired fitting degree (electrolyte content) of the soap mass, and the recorder then registers for example a decrease in viscosity, which means that the electrolyte content has been somewhat reduced, a compensation process for the electrolyte content will start at once. Valve RV will close a little, i.e., a stronger electrolyte will be fed, the viscosity will rise again, and vice versa.

The desired degree of fitting can be preset quite simply by setting the index of the instrument at the corresponding differential pressure value. This is illustrated below by graphs and tables supplied from the actual performance of a plant in operation.

The soap mass added in the fitting stage was washed twice in countercurrent. The quantity of the fitting electrolyte added, 8.9 kg.

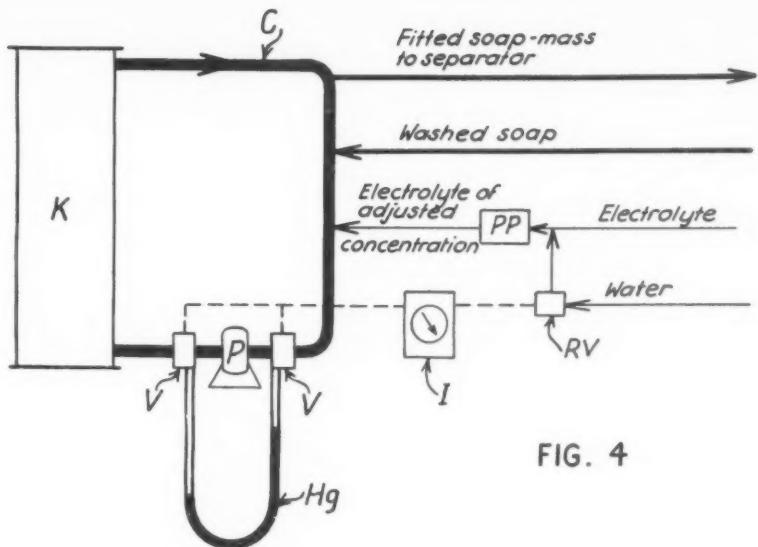


FIG. 4

to each 100 kg. washed soap, was kept constant, which resulted in a fatty-acid content in the fitting column of 57.7 per cent. The temperature was +98/+99°C. (208/210°F.). The fat to be processed had the following analysis values:

Table 1.		
Saponification number	214	
Iodine number, Wijs	46	
Titre °C.	37.1	

Samples for analysis were taken both from the column and from the heavy and light phase of the separator. On the samples taken from the column both electrolyte content and phase composition were determined. The samples from the separator were tested for electrolyte content in the light and in the heavy phase as well as the fatty-acid content in the heavy phase.

The minimum point is al-

ways the starting point for the fitting process. The fitting is checked at certain intervals, especially when the composition of the stocking charge is changed during operation. In the annexed diagrams, the typical V-shaped deviations from the regular path of the recording instrument imply determinations of the minimum point. The working point is then set at a certain distance from the minimum.

Analysis values and instrument settings are shown in Table 2. In Figs. 5, 6, and 7 these values are represented graphically.

The minimum point is on scale division 37. In the column the electrolyte content (NaOH + NaCl) at the minimum point is 1.01 per cent. The mixture consists of 84 per cent (by volume) neat soap and 16 per cent (by volume) nigre.

Table 2. Working point located at various distances from minimum point

R e c o r d e r	Fitting Column					S e p a r a t o r		
	Index	Distance from min.	Composition, % by vol.			Neat soap NaOH + NaCl%	Nigre NaOH + NaCl%	Percentage of fatty acids
			Neat soap	Nigre	Spent lye			
	37	min.	84	16	0	1.01	—	—
	41	4	85	15	0	1.12	0.36	4.55
	43	6	85	15	0	1.15	0.43	5.11
	45	8	86	14	0	1.17	0.47	5.54
	50	13	86	14	0	1.23	0.49	6.06
	53	16	87	13	0	1.25	0.53	6.29
	57	20	87.5	12	0.5	1.29	—	6.70
	62	25	88.5	10	1.5	1.33	0.57	7.23

# SANDROL

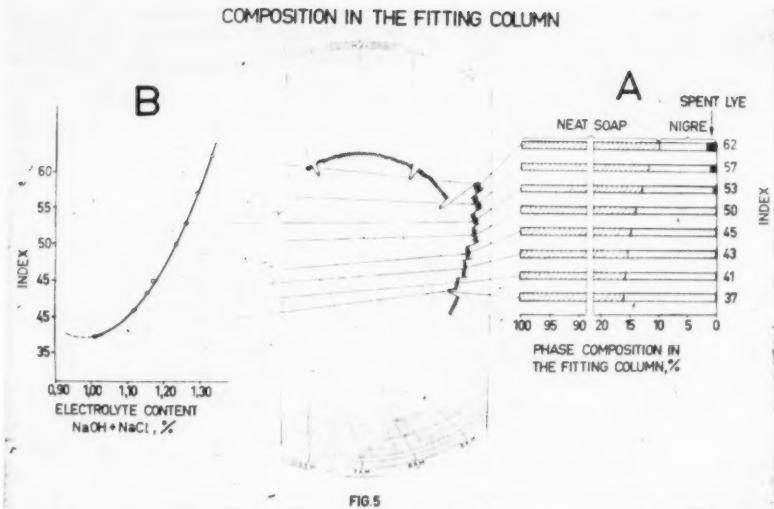
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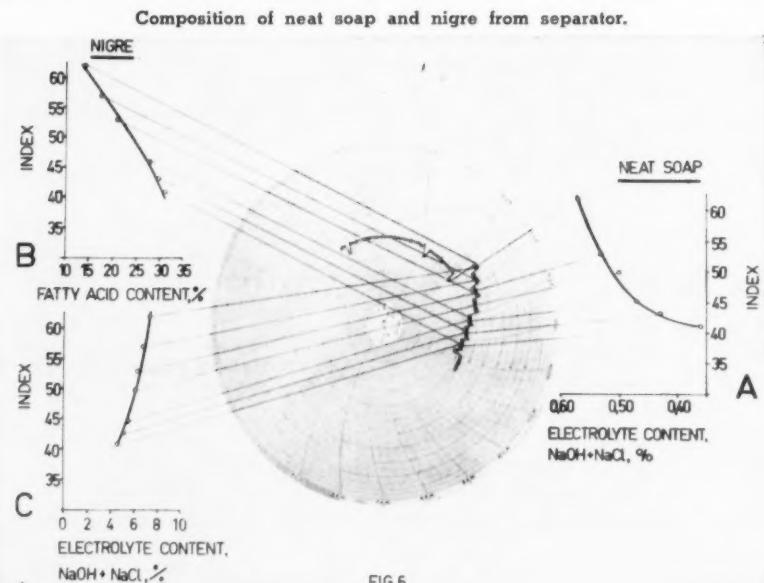
**CLINTWOOD CHEMICAL  
COMPANY**  
33 N. LaSalle St., Chicago 2, Ill.



When the working point was moved to different levels in relation to the minimum point (Fig. 5) and at a growing distance from the latter, the nigre content in the column began to decrease. At about 18 scale divisions from the minimum point (between index settings 53 and 57) the first traces of spent lye began to appear. From its previous position within the fitting zone the soap mass now began to pass over into the three-phase zone. The electrolyte content of the mixture rose continuously from 1.01 per cent at the minimum point up to 1.27 per cent when the spent lye phase began to appear. Thus the difference

in electrolyte content from the minimum point to the limit of the three-phase zone is 0.26 per cent for the fat mixture in question and at a fatty-acid content of 57.7 per cent in the column. The extent of this zone can vary, depending on the composition of the fatty acids in the fat stocking charge.

Separated neat soap from the separator has its lowest electrolyte content when working close to the minimum point (Fig. 6A). The greater the distance between the working point and the minimum point, the higher the electrolyte content will be. Thus at 4 scale divisions away from the minimum point an electrolyte content



of 0.35 per cent is obtained, and at 18 scale divisions from the minimum point, where the three phases begin to appear in the column, an electrolyte content of 0.54 per cent is obtained. The nigre (Figures 6B and C) has its lowest electrolyte content and its highest fatty-acid content close to the minimum point. The greater the distance between the working point and the minimum point, the higher the electrolyte content of the nigre. At the same time its fatty-acid content will be lower.

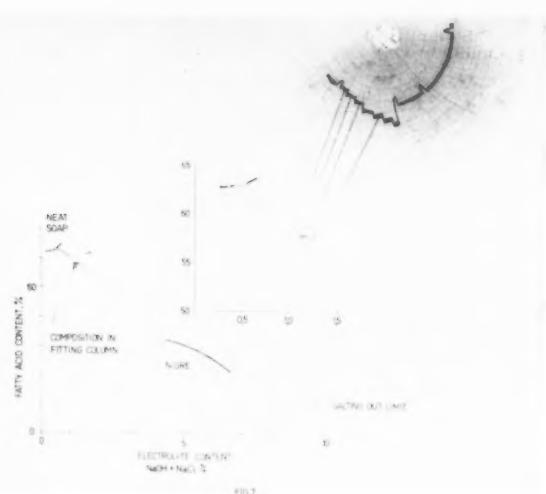
At the trials in the two highest index positions (57 and 62), nigre + spent lye were analyzed together and entered in the table as "nigre".

Fig. 7 shows where the mixtures or phases from operation at different levels are located in a McBain diagram. When the working point is gradually moved to higher index values, a displacement to the right in the diagram takes place.

Now let us examine the sensitivity of the system, for instance in the zone from a preset index of 41 (Table 2), with the lowest working point at a distance of four scale divisions from the minimum point, up to a preset index of 62, with the working point 25 scale divisions from the minimum point, i.e., a difference of 21 scale divisions. We then find that the electrolyte content changes from 1.12 per cent to 1.33 per cent in the column, in other words 0.21 per cent  $\text{NaOH} + \text{NaCl}$ . Thus, for each scale division a change in electrolyte content of 0.01 per cent is obtained. The sensitivity is greater in the steep part of the control curve. Studying the zone between 50 and 62, where the curve is steep, we find that 12 scale divisions correspond to a change of 0.10 per cent, i.e., a change in electrolyte of 0.008 per cent per scale division. This accuracy must be considered as being extremely good, considering that the presetting is also done with a very high degree of certainty.

It is generally desirable to

Fig. 7. Positions in a McBain diagram for operation at different distances from minimum point.



produce a fitted separated soap with the lowest possible electrolyte content. As may be seen from the figures and pictures reproduced here (Table 2 and Fig. 6), one must work comparatively close to the minimum point in order to obtain a really low electrolyte content in the separated fitted neat soap. On the other hand, the min-

imum point should not be passed, as on the left branch a zone begins in which separability is very low.

The really favorable working range covers an electrolyte content which exceeds that of the minimum point by 0.10 up to 0.15 per cent (Figures 5B-6A). For this reason, if the fitting is to be ac-

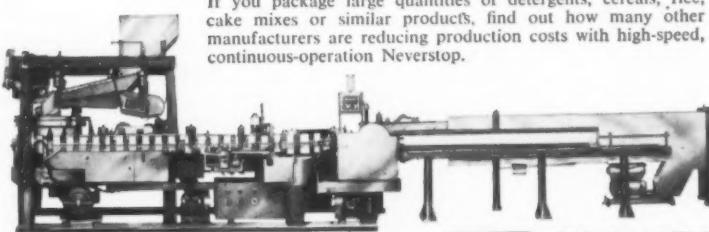
(Turn to Page 207)

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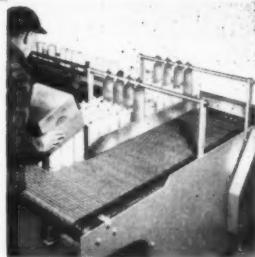
#### For Air Cleaning

containers of any size or type. The E-Z Air Cleaner is ideal for semi-automatic packaging operations. Small, portable. Containers are inverted over air valves, two at a time, up to 40 per min. Fast, efficient. Write for the "E-Z Bulletin."



#### For Rinsing

with cold or hot water or steam. Handles any size bottle or jar. Rinses inside and outside of container if desired. Bottle Rest protects against neck-chipping. Operation is simple, effective. Write for "Rotary Rinser Bulletin."



#### Feed Containers

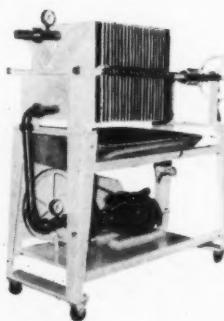
to your packaging line at a steadier pace and a lot cheaper! Just dump 'em on, and let the Feeder take charge. Handles any shape or size container. Pays for itself quickly. Write for the "Feeder Bulletin."

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for SOAP AND  
CHEMICAL SPECIALTIES  
is the

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YOUR COOPERATION IN  
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STRUCTIONS ON TIME  
WILL HELP US MEET OUR  
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SOAP and CHEMICAL SPECIALTIES

# soap plant observer

By **Willis J. Beach**,  
Technical Service Department,  
Sugar Beet Products Co.

IT'S been a year and a half since we told the story about Sam Gooch, who couldn't "spel" but sure could sell. Only recently we heard from an old friend whose sales record was among the best, and whose background goes way back to the knock-down-drag-out days in the appliance business during the big depression. Anyone who survived and produced during those days had to be good. He had worked hard and knew all the tricks. One of the best tricks he learned was never to give up. What he says in the following note reflects his boundless spirit and his understanding of the other fellow's problems.

"So you want to be an industrial salesman. Boy, you are in for troubles! You hear that So & So Co. needs a salesman. You apply, qualify and are hired. You study hard. You learn all you can of the product and the company, and are finally assigned to a territory.

"You make your first call, full of 'wim, vigor and vitality' — buyer too busy. Second call: 'Not today, see me next trip.' Third call: 'Not interested.' Fourth call, an old customer — should get an order here — but: 'Price too high. We found one cheaper.' Fifth call: buyer not back from lunch yet. Sixth call — complaints here: 'Product no good. Company likes competitor's product.' Seventh call: 'Wim and Vigor' gone, but you make the call and get an order. Eighth call: Your company is blankety blank because it won't allow a discount. Ninth call: Your 'vitality' is gone too now. It's late so you go home. Your mail has to be read, bulletins to study, notes from the boss to answer, reports to get out and plans for tomorrow's



calls to be worked up. And so on and on goes the life of a salesman.

"Boy, do you have troubles! Sure you do, but how about the boss, He hired you! Did he make a mistake? He has to write the sales bulletins you have to read. He has to read the reports you write. He has to write letters to your customers to smooth out the complaints you get. He has to keep

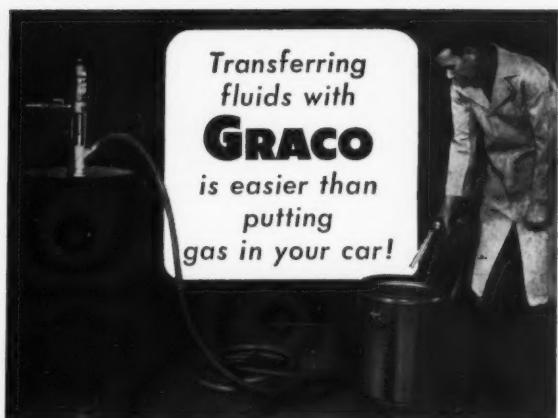
records of your sales. He has to figure ways of helping you increase your business. He has to meet with management and talk over budgets, profits, sales costs, advertising, and other ways and means of increasing sales, and show reasons why business isn't better and what he intends to do about it, and what he is going to do to help you.

"Multiply all this by the number of other salesmen working under your boss. Five times your troubles? 10? 30? 50? That's the boss' job. Boy, has he got troubles."

My friend is now retired. Boy, is he lucky! No more customer gripes. No more price cutting worries. No more bulletins to study. No more blankety blank reports to make out. No more quotas to make. Yes, and no more worries? *Boy, is he unhappy!* He'd gladly trade places with any salesman to read bulletins again, make out reports, listen to customer com-

(Turn to Page 184)

Material Tested	Density lbs/cu. ft.	Screw Size	Max. Rate lbs/min.	Accuracy %	Source
bentonite	52.4	1" flight	3.0	0.9	Amer. Colloid
borax	60.0	3" flight	78.0	0.5	U. S. Borax
"Cab-o-Sil"	1.0	1/2" wire	.01	1.5	Cabot
CMC (pwd)	52.2	1/2" wire	.22	1.7	Dewey & Almy
"Decalite"	12.0	1" flight	0.35	2.0	Amer. Cyanamid
"Fab"	—	2" flight	14.0	1.5	Colgate
"Microcel"	—	2" flight	3.0	2.5	Johns-Manville
naphthalene flakes	36.0	3/8" wire	.06	1.4	Allied Chem.
sod. perborate	63.0	3" wire	72	0.4	Procter & Gamble
sod. pyrophosphate	63	1/2" wire	.3	0.6	local
sod. tripoly phosphate	58	2" flight	27	0.5	Colgate
stearic acid (flakes)	30	2" wire	13	1.2	Emery Industries
titanium dioxide	57	1" wire	5.6	1.3	N. J. Zinc
wax	26.9	1" flight	2.6	0.9	Bemis Bros. Bag
wood flour	11.1	3" wire	9.8	2.0	S. J. Fitzpatrick
corn flour	33.6	2" flight	17.5	1.1	D. C. A. Food Inds.
zinc stearate	10.9	3/4" wire	0.14	1.5	Dow Chemical



With a lightweight, Graco Fast-Flo pump you can transfer fluids fast, "direct-from-drum!"

Air-powered, there's no danger of sparking or motor burn-outs. Just put the Fast-Flo in a drum and attach plant air line. Pump starts when gasoline type valve attached to hose is opened. Pump stops when valve is closed. *Positive control at valve* provides instantaneous fluid flow . . . eliminates pressure build-up in drum.

Graco pumps are also available in stainless steel. See your nearest Graco dealer or write:

**GRACO**  
ENGINEERS & MANUFACTURERS

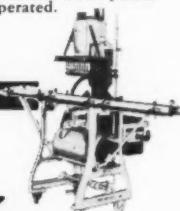
See Phone Book Yellow Pages "Spraying" for Graco Suppliers

**GRAY COMPANY, INC.**  
933 Graco Square  
Minneapolis 13, Minnesota

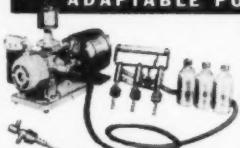


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For all bottle sizes with  
I. D. neck openings 1/8" up—liquid contact parts  
either stainless steel, bronze alloy or plastic.

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# new patents

Listed below are brief abstracts of recently issued patents. Complete copies may be obtained from the publisher of this magazine:—MacNair-Dorland Co., 254 W. 31st Street, New York 1, N. Y. Remit \$1.00 for each copy. For orders received from outside of the United States send \$1.50 per copy.

**No. 2,988,511. Nonsmearing Detergent Bar.** patented by Victor Mills, Wyoming, O. (Procter & Gamble Co., P. O. Box 175, Cincinnati 31) and Edwin O. Korpi, Procter & Gamble Co., MA & R Bldg., Cincinnati 17. Described is a milled detergent bar at least 75% by weight of which consists essentially of (1) from about 15% to about 55% of normally solid detergent salts of anionic organic sulfuric reaction products which do not hydrolyze unduly under conditions of alternate wetting and drying, said salts being selected from the group consisting of the sodium and potassium salts, and said anionic organic sulfuric reaction products containing at least 50% alkyl glyceryl ether sulfonates from about 10% to about 30% of which alkyl glyceryl ether sulfonates are alkyl diglyceryl ether sulfonates, the alkyl radicals containing from about 10 to about 20 carbon atoms; (2) from about 5% to about 50% of a water-soluble soap of fatty acids having from about 10 to about 18 carbon atoms; and (3) from about 20% to about 70% of a binder material selected from the group consisting of freshly precipitated calcium soaps of fatty acids having from about 10 to about 18 carbon atoms, freshly precipitated magnesium soap of fatty acids having from about 10 to about 18 carbon atoms, starch, normally solid waxy materials which will become plastic under the conditions encountered in the milling of soap and mixtures thereof.

**No. 2,989,484. Foaming Cleansing Composition.** patented by Alfred Kirstehler and Karl Goldann, Dusseldorf, Germany, assignors to Boehme Fettchemie, G. m. b. H., Dusseldorf. Claimed is a foaming-cleansing composition consisting essentially of a surface-active component selected from the group consisting of water soluble soaps, synthetic organic non-soap anionic detergents and synthetic organic nonionic detergents which produces a foam in aqueous solution

and, as a foam-improving and foam-stabilizing additive, from 0.5 to 6.0% by weight, based on the foam-producing component, of a compound selected from the group consisting of amino-carboxylic acid amides having the structural formula



wherein R is an aliphatic hydrocarbon radical containing from 6 to 18 carbon atoms, R<sub>1</sub> is a hydrogen atom, R<sub>2</sub> is selected from the group consisting of lower hydroxyalkyl and mono-carboxymethyl and R<sub>3</sub> is monocarboxymethyl, and their alkali metal salts.

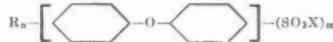
The detergent composition of claim 1 wherein up to 35% by weight of sodium polyphosphate is present.

**No. 2,988,473. Petroleum Hydrocarbon Insecticidal Composition Containing Organo-Silicon Oxide Condensation Products.** patented by Arnold Mallis, Pittsburgh, and Albert C. Miller and Charles E. Trautman, Cheswick, Pa., assignors to Gulf Research & Development Co., Pittsburgh. This invention covers an insecticidal composition consisting essentially of a petroleum hydrocarbon oil having insecticidal properties and boiling in the range from about 300° to 800° F. and from about 0.001 to 2 percent by weight of a liquid organo-silicon oxide condensation product having the formula:



wherein R is selected from the group consisting of lower alkyl and aryl radicals and n is an integer.

**No. 2,990,375. Heavy Duty Liquid Detergent Compositions.** patented by Alfred F. Steinhauer and Joseph C. Valenta, Midland, Mich., assignors to Dow Chemical Co., Midland, Mich. The invention covers a clear transparent aqueous liquid detergent composition consisting of a transparent aqueous solution containing (1) an alkyl diphenyl ether sulfonate having the general formula:



wherein R represents an alkyl radical containing from 9 to 15 carbon atoms and n is an average number from 1 to 1.3, X represents a member of the group consisting of sodium and potassium and m is an average number from 1.8 to 2.4, and (2) an inorganic phosphate selected from the group consisting of sodium tripolyphosphate,

potassium tripolyphosphate, potassium pyrophosphate and mixtures of potassium pyrophosphate and sodium pyrophosphate, said solution containing a combination of ingredients in proportions by weight, based on 100 parts by weight of the solution, which combination is selected from the group consisting of: (a) from 5 to 50 parts by weight of the potassium alkyl diphenyl ether sulfonate (1) and from 5 to 45 parts of inorganic phosphate (2) selected from the group consisting of potassium pyrophosphate and mixtures of potassium pyrophosphate and sodium pyrophosphate, which mixtures contain not more than 5 parts by weight of sodium pyrophosphate, and in a total concentration between 10 and 55 percent by weight of the solution and within the lines ABCDA of the trilinear diagram of the drawing; (b) from 5 to 25 parts by weight of the sodium alkyl diphenyl ether sulfonate (1) and from 5 to 35 parts by weight of the inorganic phosphate (2) selected from the group consisting of potassium pyrophosphate and mixtures of potassium pyrophosphate and sodium pyrophosphate, which mixtures contain not more than 5 parts by weight of sodium pyrophosphate, and in a total concentration between 10 and 50 percent by weight of the solution and within the lines AEFG-HIA of the trilinear diagram of the drawing; (c) from 5 to 40 parts by weight of the alkyl diphenyl ether sulfonate (1) and from 5 to 40 parts of the inorganic phosphate (2) consisting of potassium tripolyphosphate, and in a total concentration between 10 and 55 percent by weight of the solution and within the lines AJKLM-NOA of the trilinear diagram of the drawing; and (d) from 5 to 45 parts by weight of the potassium alkyl diphenyl ether sulfonate (1) and from 5 to 20 parts by weight of the inorganic phosphate (2) consisting of sodium tripolyphosphate, and in a total concentration between 10 and 50 percent by weight of the solution and within the lines APQRA of the trilinear diagram of the drawing, said inorganic phosphate (2) being in proportions of from 1 to 1.5 parts by weight per part by weight of the alkyl diphenyl ether sulfonate (1).

**No. 2,987,435. Germicidal Compositions.** patented by Thomas Gwyn Davies, Vaucluse, N.S.W., Australia and Doreen Lois Wedderburn, London, England, assignors to Lever Brothers Co., New York. Revealed is a process of cleaning and disinfecting a material which comprises the steps of contacting said material with a solution of sodium hypochlorite containing from 0.45% to about 5% of available chlorine and thereafter contacting said material with an aqueous solution containing from about 0.05% to about 5.0% by weight of benzalkonium chloride.



## Improve gloss and antislip properties of floor polishes...with A-C Polyethylene

Higher gloss...antislip...longer wear-life—these are among the many advantages that A-C® Polyethylene brings to industrial floor polishes.

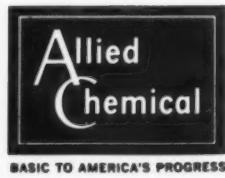
Polishes containing A-C Polyethylene also resist damp mopping, re-buff to a high luster, are non-yellowing, contain no catalysts detrimental to rubber.

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other resins. Physical properties are uniform. Supply and prices are stable. You can also use A-C Polyethylene to upgrade liquid or paste polishes for shoes, furniture and cars.

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**PLASTICS DIVISION**  
40 Rector Street, New York 6, New York



# products and processes

## Synthetic/Soap Bar

Formulation of a combination of toilet soap bar must aspire to combining the lime soap dispersing power of synthetic detergents with the plasticity, crack resistance, and economy of soap. Isethionates and taurides are suggested for this use. These anionics combine soap compatibility with good lime soap dispersing power and mild dermal properties.

Taurides and methyl taurides are excellent lime soap dispersers, according to a German source. Activity increases with length of fatty acid chain. Thus five to 10 per cent of stearoyl methyl tauride in a toilet soap base imparts as much hard water resistance as 15 to 20 per cent of lauroyl methyl tauride and 20 to 30 per cent of an isethionate. However, the stearoyl compound is a poorer foaming agent.

An isethionate bar of desirable performance properties is covered by U. S. patent 2,894,912 (Geitz to Lever Brothers Co.) July 1959. This bar is composed as follows:

	per cent
Coconut fatty acid esters of sodium isethionate (100% active)	49.4
Sodium dodecyl benzene sulfonate	4.87
Stearic acid, triple pressed	24.0
Water	4.4
Sodium tallow soap, anhydrous	10.03
Sodium sulfate, perfume, pigment, etc.	7.3

— ★ —

## Stain Removers

A product designed to remove lipstick stains from fabrics contains the following ingredients:

"Tergitol Nonionix NPX"	
(Carbide)	1.0 pound
"Carbitol" (Carbide solvent (low gravity)	2.0 gallons
Isopropanol, anhydrous	1.5 "
Cleaners' naphtha	8.0 "

Mix "Carbitol," isopropanol, and naphtha. Add "Tergitol" and stir until a clear solution is obtained. *Warning:* Avoid open flames when mixing or using this formula.

A paint and tar remover is formulated as follows:

	parts/wt.
Xylene	140.0
Trichloroethylene	47.0
Ethylene dichloride	61.0
Isopropanol, anhydrous	33.0
Oleic acid	40.0
Sulfonated castor oil	24.0
Triethanolamine	21.5

Mix solvents, oleic acid and sulfonated oil; add amine and stir until a clear solution is obtained.

*Warning:* Avoid open flames when mixing or using this formula. Adequate ventilation should be provided and special care should be taken to avoid inhaling vapors and repeated contact with the skin whenever chlorinated solvents are used.

Suggested formulations published by Union Carbide Chemicals Co., 270 Park Avenue, New York.

— ★ —

## Propylene Glycol Shampoo

Propylene glycol, U.S.P. may be used in a number of personal products such as shaving creams and shampoos. Shampoos may be formulated as follows:

	parts/wt.
Sodium alkyl aryl sulfonate	20
Propylene glycol, U.S.P.	12
Triethanolamine laurate	1
Water	80
Perfume	as required

Procedure: Dissolve triethanolamine laurate in water and add detergent. Dissolve perfume in propylene glycol and mix the solutions. (Jefferson Chemical Co., 1121 Walker Avenue, Houston, Tex., technical bulletin on Propylene Glycol, U.S.P.)

## Antifungal Foot Spray

A two to three per cent solution of undecylenic acid monoethanolamide in isopropanol is said to yield an aerosol foot spray of good fungistatic properties. However, such a product must be dispensed in droplet form rather than as a fine spray. If the valve is set too fine the small particles will act as nose irritants and cause sneezing. *Seifen-Oele-Fette-Wachse*, No. 14, 1961, p. 424.

— ★ —

## Improved Bubble Bath

A nonionic detergent added to a bubble bath mixture of anionic detergent and alkylolamide is said to act as foam stabilizer. Products obtained by condensing one mole of octyl cresol or octyl phenol with nine to 10 moles of ethylene oxide are most suitable for this application, although poor foaming agents by themselves.

A composition exhibiting excellent lathering properties was made up as follows:

	parts
Triethanolamine lauryl sulfate (10% active)	30
Lauric acid diethanolamide	20
Octyl cresol condensate (9 moles ethylene oxide)	20
Water (incl. water in triethanolamine lauryl sulfate)	52

This product is said to be suitable not only for use as a bubble bath but also as a shampoo. (*Schimmel Briefs*, June 1961, published by Schimmel & Co., Windsor Highway, Newburgh, N. Y.) The above information is covered by British patent 818,158.

— ★ —

## New Behenamide

A new Behenamide, primarily in the  $C_{18}C_{22}$  range, for improved initial and continuing water repellency in textile formulations, has been announced by the chemical division of Humko Products, Clifton, N. J.

(From Page 179)

plaints, worry about quotas and competition.

He misses the fun of selling, the contacts with all kinds of people, the problems of business, the luncheons, the meetings, the battle for sales and the challenge of being a good salesman.

The writer can look back upon the life of a salesman — his father's. In his day, the "twenties"

and "thirties," the life of a salesman was often tougher than it is today. In the summer, Dad was expected to navigate his "flivver" over roads filled with ruts and mud. In the winter, he shivered in lonely railroad stations awaiting connections that left much to be desired. There were no modern motels with central heating, air-conditioning, and television. Dad was probably the first salesman to introduce "Blue Sunoco" to New

England, and he would leave home Sunday night or early Monday morning. That's the last we would see of him until late Friday night or Saturday morning. One statement he made left a lasting impression on me. He was referring to a new account: "I knocked on that door seven years before it was opened."

To the salesman, I say the company can be only as successful as your sales can make it. Sure, you have troubles. Be glad they are no worse than they seem. And remember, if you ever want to trade them for a life of ease, you won't have to look far for a taker. My retired friend is looking for a deal!

#### **Screw Feeder Data**

As a guide to process design engineers, for forecasting performance of its screw feeders in actual operation with materials of known density, an eight-page data folder is available from Vibra Screw Feeders, Inc., Clifton, N. J., covering over four hundred dry materials. Data on a few materials of interest to our readers are reproduced in the accompanying table.

The data are based on feeder operation over successive timed intervals of one minute or less, controlled by automatic switch. Generally, 30 successive samples were collected, and each sample weighed. Values shown in the % Accuracy column represent half the difference between the highest and lowest sample weights of all 30 samples, divided by the average sample weight, and expressed as per cent.

#### **Universal Has New Line**

A new series of high molecular weight fatty acid derivatives for use as detergents, corrosion inhibitors, emulsifiers, etc., was announced recently by Universal Chemicals Corp., Central Falls, R. I. Universal's line includes anionic, nonionic, cationic, and a new group of amphoteric surface active agents. A technical bulletin describing these products is available.

## **SOAP & CHEMICAL SPECIALTIES**

### **Circulation Policy**

and

### **"Readership Reports"**

This publication sells subscriptions only at the full subscription rate and only by mail — does *not* offer cut price deals nor use the services of high-pressure subscription salesmen. Nor does it *list* its copy price at 50 or 60¢ each and then *actually sell* subscriptions at 3 or 4¢ per copy.

Because we do not "force" subscription sales, and because SOAP & CHEMICAL SPECIALTIES is edited for a specific industry and not for the purpose of coaxing in stray advertising, the magazine maintains an ABC subscription renewal rate year in and year out above 80% — currently 81.6%, to be exact.

Publications with renewal rates going all the way down to 50% or lower need "readership studies," either prepared by themselves or others, to try and convince advertisers and agencies that their books are being read. SOAP & CHEMICAL SPECIALTIES does not. If an ABC 81.6% subscription renewal rate is not convincing, it is quite unlikely that anything else will be.

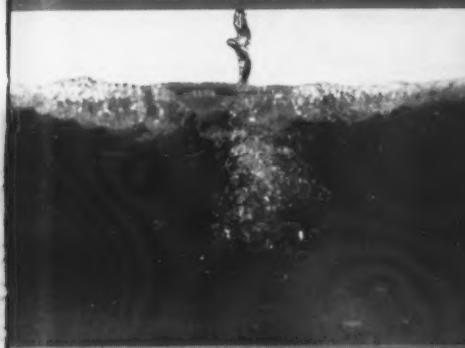
**The Publisher**

## BALANCE MAKES THE

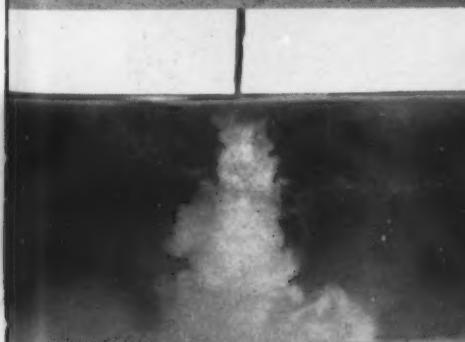
## DIFFERENCE...

...in solving problems that involve surface active agents. The perfect balance of many components is often required to create an emulsifier to assure optimum performance. Proper balance also means savings through more economical emulsifier levels.

Witco's Emcol surface active agents offer the chemist the broadest latitude in solving problems involving emulsification, dispersion, and other colloidal effects. The Emcol line includes anionic, nonionic, and cationic products. For more information on these versatile materials, send for your copy of Witco's brochure describing the "Emcol Surface Active Agents". Write to Technical Service Department E 310.



1 Two immiscible phases separate immediately when a hydrocarbon solvent containing no emulsifier is poured into water.



2 The same solvent containing 3% of a poorly balanced blend of anionic-nonionic emulsifiers forms only a fair emulsion in water.

EMCOL DIVISION



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sodium tripolyphosphate  
tetrapotassium pyrophosphate



## PICK THE ALKALI THAT'S RIGHT FOR YOU

You can get Hooker caustic soda, caustic potash, and carbonate of potash in 30 different forms and grades.

Such variety gives you maximum flexibility in meeting your processing needs.

You save on shipping costs, too, because two or more of these consistently uniform alkalies can be ordered together in mixed carloads or mixed truckloads. One order, one billing, one responsibility—cuts buying and book-keeping.

Your process requirements may have reached the point where a change in alkali form, grade or strength will spell savings for you. Our representative knows the economics of these alkalies. He can relate to your needs the most advantageous of 10 different forms and grades of caustic soda, 13 forms and grades of caustic potash, and 7 forms and grades of carbonate of potash. Just write the nearest Hooker sales office.



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Your customers insist on consistency in the detergents you make for them... and consistency is a quality you can depend on when you standardize with Hooker phosphates.

Sodium tripolyphosphate is one of our specialties. This Hooker phosphate is 98% pure. It flows freely. It's available in three forms: spray-dried granular (30% more bulk without additional weight), regular granular, and powder.

Hooker sodium tripoly is made by our Phosphorus Division. You're invited to write to the Division's headquarters at Jeffersonville, Ind., for more information on this product.

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Now you can obtain tetrapotassium pyrophosphate from our Phosphorus Division plant in Jeffersonville, Ind.

Hooker tetrapotassium pyrophosphate has high sequestering power. Formulated into your heavy-duty liquid detergent, it has the power to dig in deep to draw out dirt. No matter how badly soiled an article, dirt can't be redeposited or adhere to cleaned fabrics.

Solid form assays 99.0%  $K_4P_2O_7$  and is available in granular and powder forms. Also available as a 60% solution.

Hooker TKPP doesn't vary in quality. It's compounded from phosphoric acid and caustic potash, both made by Hooker, specialists in phosphorus and potassium chemistry.

Our TKPP data sheet will give you more complete technical information. Just check the coupon.



For more information, check off data sheets you want and mail this coupon with your name, title and company address.

Caustic soda       Carbonate of potash  
 Caustic potash       Tetrapotassium pyrophosphate  
 Sodium tripolyphosphate

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# News...

PEOPLE • PRODUCTS • PLANTS

Economics, Klensack to Merge

\* \* \*

Lestoil Names Fredericks

\* \* \*

Bacon in Harley Post

\* \* \*

New Simoniz Floor Finish

William G. Werner retired July 31 after 50 years with Procter & Gamble Co., Cincinnati. He was head of the public relations department, which he organized, for over 20 years. Earlier he had been P & G's advertising manager.





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laboratory can provide the answer.

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odor masking or perfuming  
problem may be, write us  
for assistance.

•

**SCHIMMEL & CO., INC.**

Windsor Highway, Newburgh, New York

# NEWS

## Solarine Names Miller

John E. Miller was recently appointed sales representative for the New York-New England ter-



John E. Miller

ritory of Solarine Corp., including the Duo Della Products Division, Baltimore, Md.

Mr. Miller has extensive experience in the floor maintenance field, and is also a specialist on carpet and rug cleaning, having completed the training course given by the National Institute of Rug Cleaners.



## William Werner Retires

William G. Werner, (see cut, page 187) head of public relations for Procter & Gamble Co., Cincinnati, for over twenty years, retired July 31 after 50 years of service with the company.

Mr. Werner, a nationally known leader in the public relations field, organized P&G's public relations department in 1941 and served as manager until 1954. From 1954 to 1959 he was director of public and legal services, a position encompassing the firm's public relations and legal staff activities. During 1959-1961 he handled special assignment projects of a public relations and legal nature.

Returning to the sales department after serving in the in-

fantry in World War I, Mr. Werner subsequently moved into advertising. He was manager of P&G's advertising division from 1925 until 1940, and supervised the establishment of many of the advertising practices P&G uses today.

During his 50 years with the firm, Mr. Werner represented P&G in more than a score of trade associations and public service groups. He has served on the boards of the Advertising Council and the Advertising Federation of America; is past chairman of the National Better Business Bureau; and is past president of the Public Relations Society of America and the United States Trademark Association.



## Oakite Appoints Jones

Robert P. Jones, New England division manager of Oakite Products, Inc., since 1954, has been assigned to the New York headquarters of the firm, which manufactures industrial cleaning and metal treating compounds.

Mr. Jones, who joined Oakite in 1949 as a technical service representative in Indianapolis, will do staff work at the New York office. He is succeeded in his New England post by Roger R. Heroux, formerly the company's representative in Springfield, Mass.

Robert Jones



## Simoniz Elects Tyson

John M. Tyson has been elected to the newly created position of vice-president in charge of



John M. Tyson

sales for Simoniz Co., Chicago, it was announced recently. Mr. Tyson, formerly director of advertising, directs overall sales and sales promotion activities for the company. Max G. Kocour succeeds him as advertising director.

Before joining Simoniz in 1960, Mr. Tyson spent 10 years in marketing, merchandising and advertising with Leo Burnett Co., and McCann-Erickson, Inc., New York.

## Carter Profits Up

Carter Products, Inc., New York, recently reported net earnings for the first quarter ended June 30, were \$2,524,492, equal to 97 cents a share, as compared with earnings of \$2,167,005, or 83 cents a share, during the corresponding quarter in 1960. Net sales for the first quarter were \$15,760,946, as compared with \$15,069,236 in the 1960 period.

## Owosso Name Change

Owosso Chemical Products Co., 7067 Davison Road, Davison, Mich., recently announced the changing of its name to Spec-Dee Chemical Products Co.

### Harvey to Oil Specialties

The appointment of George Harvey to the sales department of Oil Specialties & Refining Co.,



George Harvey

Brooklyn, N. Y., manufacturers of chemical specialties, was announced recently by John A. Hunt, vice-president and director of sales. A 1953 graduate of Syracuse University, where he majored in business administration, Mr. Harvey was with Janitors Supply Co., Erie, Pa., sanitary supply distributor. Also, prior to joining Oil Specialties, he was with Columbus Janitor Service Co., New Castle, Pa., contract cleaning firm specializing in floor maintenance.

Following his discharge from the U. S. Army, Mr. Harvey was employed by Johnson & Johnson, New Brunswick, N. J., manufacturer of surgical dressings and pharmaceuticals.

### Economics-Klenzade Join

An agreement to merge Klenzade Products, Inc., Beloit, Wis., with Economics Laboratory, Inc., New York, was announced recently. Stockholders of Economics Laboratory will vote on the proposal September 15, and Klenzade stockholders will vote on September 16. Combined annual sales of the two companies are reported at more than \$33,000,000.

Terms of the merger call for each 15 outstanding common shares of Klenzade to be converted into one share of \$4 cumulative convertible preferred stock, no par

value, and 4.42 common shares of Economics Laboratory. Klenzade, with a reported 176,613 shares outstanding, manufactures chemical cleansers for use in the dairy and food processing fields.

★

### Cos. Chemists' Seminar

"Should Bacteriostats be Added to Toilet Soaps?" is one of the topical questions to be discussed at the eighth annual seminar of the Society of Cosmetic Chemists to be held Sept. 26 and 27 at the Barbizon Plaza Hotel, New York. The pros and cons will be presented in a paper by W. M. Linfield and R. E. Casely of Armour & Co., Chicago.

Among other authorities slated to participate is Emil G. Klarmann of Lehn & Fink Products Corp. who will speak about "The Open Problem of Biological Activity in Cosmetics."

The general theme of the seminar is "Biological Activity in Cosmetics." H. W. Zussman is program chairman. The program has been scheduled as follows:

Tuesday, Sept. 26, A.M.: "Anti-Inflammatories," by Norman Orentreich, M.D., New York University School of Medicine; "Use of Fluorides in Anti-Cariogenic Dentifrices," by D. S. Barrie, Procter & Gamble Co.; "Should Sunscreens be Incorporated into Cosmetics?", by John M. Knox, M.D., Baylor University College of Medicine; "Enzymes," by K. L. Howard, Wallerstein Laboratories, Inc.

Tuesday, Sept. 26, P.M.: "Effects of Estrogens on Sebaceous Glands," by John Strauss, M.D., Boston University School of Medicine; "Pregnenolone Acetate a Dermatologically Active Steroid," by John Silson, M.D., Revlon, Inc.; "Vitamins," by S. H. Rubin, Hoffman LaRoche, Inc.; "Anti-Cholinergics," by J. F. Migliarese, Colgate-Palmolive Co.

Wednesday, Sept. 27, A.M.: "Antibiotics," by Vincent de Gennaro and R. E. Mackay, Chas. Pfizer & Co.; "Should Bacteriostats be Added to Toilet Soaps?", by W. M. Linfield and R. E. Casely, Armour & Co.; "Skin Bacteriostat Relations," by Thomas Furia, Geigy Industrial Chemicals Division; "Mechanism of Bacteriostatic Action," by Eugene D. Weinberg, Indiana University; "The Open Problem of Biological Activity in Cosmetics," by Emil G. Klarmann, Lehn & Fink Products Corp.

Luncheon on both days and a dinner on Sept. 26 are scheduled to be held at the New York Academy of Sciences.

### Perry Appoints Rasmussen

The appointment of Jack Rasmussen as manager of the mid-western operations for Perry



Jack Rasmussen

Brothers, Inc., New York aromatic chemical and perfume compound firm, was announced recently by Ben R. Perry, vice-president. Mr. Rasmussen, with headquarters in Chicago, will handle Perry's full line of perfuming and flavoring materials throughout the middle west. Prior to joining Perry Brothers, Mr. Rasmussen was with Albert Verley & Co., Linden, N. J., for six years.

At the same time Perry Brothers have announced the removal of their Chicago office to new and larger quarters at 14 E. Jackson Blvd. The expanded facilities are necessary to handle the firm's greatly increased volume of business in the mid-west, according to Mr. Perry. The new telephone number of the Chicago office is 427-5654.

★

### Colgate Canada Elects

James H. Carpenter has been appointed president and general manager of Colgate-Palmolive Canada, Ltd., Toronto, it was announced recently.

Formerly a vice-president of Colgate-Palmolive International, Inc., Mr. Carpenter succeeds James M. Stevenson, who has been appointed vice-president in charge of sales and advertising in the Far East for C-P International.

### Ottawa Appoints O'Brien

William C. O'Brien has been named sales manager for Ottawa Chemical Co., Toledo, O. He



William C. O'Brien

is responsible for the marketing of Ottawa's products in both domestic and foreign markets.

Mr. O'Brien has held varied general managerial and sales positions with Visual Electronics, Inc., New York, and Allen B. Du Mont Laboratories, Passaic, N. J.

### Harley Names Bacon

Harley Soap Co., Philadelphia, has appointed Robert J. Bacon to supervise their newly established new products merchandising department, it was announced recently. The firm manufactures a wide range of industrial and sanitary maintenance products that include disinfectants, hand cleaners, floor cleaning compounds, and ice and snow melters.

### Robert Aude Dies

Robert M. Aude, 47, president of the Heyden Chemical Division of Heyden Newport Chemical Corp., New York, died August 20th at his home in Upper Saddle River, N. J., following a short illness.

Prior to joining Heyden eight years ago, Mr. Aude was associated with Monsanto Chemical Co., St. Louis, Mo. While with Heyden he was successively manager of the corporation's Garfield and Fords, N. J., plants; director of sales planning and coordination

in New York; and vice-president and general manager of Heyden Chemical Division, prior to his appointment as president of the division in May 1960.

### Purex Purchases Potter

Purex Corp., Ltd., South Gate, Calif., announced last month the purchase of Potter Drug and Chemical Co., Malden, Mass., for \$3,000,000, in cash. Potter, incorporated in 1889, manufactures and sells the "Cuticura" line of soap and other medicated drug products. Its annual sales are approximately \$3,000,000.

Consolidation of the two companies will result in Potter functioning as a subsidiary of Purex. Francis M. Putnum, Potter president, continues to serve in that position and Karl M. Place has been appointed executive vice-president and treasurer.

Preliminary figures indicate that Purex sales for the fiscal year ended June 30, 1961 will be over \$102,000,000, with net earnings after taxes in excess of \$4,300,000, up about 25 per cent from last year's total, it was reported.

### Axelrood to Morton

Morton Chemical Co., Chicago, recently announced the appointment of Jack Axelrood to its patent and trademark staff. Mr. Axelrood, a member of the Illinois Bar Association, was formerly chief chemist with Colburn Laboratories, Chicago.

Jack Axelrood



### Allied Names Blalock

Appointment of Jack M. Blalock as a manager of heavy chemical sales for the General



Jack M. Blalock

Chemical Division of Allied Chemical Corp., New York, was announced recently. With the division for 14 years, and manager of market surveys for the last two, Mr. Blalock is responsible for the sales of sodium phosphates for detergents and sodium metasilicates.

### Lestoil Marketing Head

Edward J. Fredericks has been named to the newly created post of director of marketing for Lestoil Products, Inc., Holyoke, Mass., it was announced last month. He was formerly marketing director for Simoniz Co., Chicago.

Mr. Fredericks is in charge of domestic, international and industrial sales, as well as corporate and product advertising, sales promotion and public relations. In addition, he heads Lestoil's expanded group of brand managers.

### Baird to Acquire Barlow

Baird Chemical Industries, New York, recently announced plans to acquire Barlow Chemical Corp., Ossining, N. Y., for cash. Directors of both companies have approved the plan, and stockholders of Barlow will vote on the proposal this month.

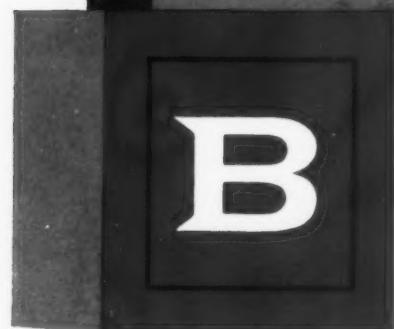
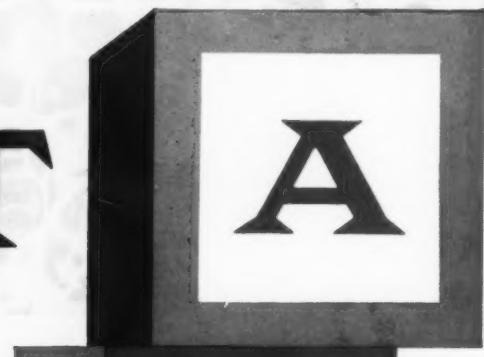
Barlow, a 10-year old producer of quaternary ammonium compounds and tertiary amines, operates production and research facilities in Ossining.

*dry  
neutralization*

*emulsion  
cleaners*

*liquid  
detergents*

# PILOT A



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## Detergent/Soap Market Still Growing

THE combined detergent and soap market continues its steady growth, showing a 2.1 per cent increase in tonnage and 2.0 per cent increase in dollar value in the first half of this year over the corresponding period of 1960. Total combined soap and detergent sales amounted to 2,200,385,000 pounds, valued at \$560,732,000, in the first six months of 1961, compared with 2,155,550,000 pounds and \$549,942,000 in the first half of 1960. These totals are collated at three monthly intervals by the Association of American Soap & Glycerine Producers from reports by 51 manufacturing member companies participating in the census.

Synthetic detergents continue their inroads into what once used to be the soap market. They now account for 77.2 per cent of the combined tonnage and 72.9 per cent of the total dollar value making up the soap and detergent market. This represents an increase of 1.4 per cent in volume and 1.1 per cent in value over the first six months of 1960.

Sales of all types of synthetic detergents (solid, liquid, and shampoos) rose in the period under review to 1,697,620,000 pounds, valued at \$408,968,000, from 1,633,002,000 pounds and \$394,798,000 reported in the first half of 1960. These figures represent a sales increase of 4.0 per cent in tonnage and 3.6 per cent in dollar value.

Liquid detergents are again the most spectacular growth item in the field, up 13.2 per cent in volume and 8.7 per cent in value over the corresponding period of last year. Sales of liquid syndets (excluding shampoos) in the first half of 1961 amounted to 349,448,000 pounds, valued at \$107,981,000, compared with 314,608,000 pounds and \$106,935,000 in the first six months of 1960.

Packaged liquids, presumably largely for household use, con-

tinued to account for the lion's share of the liquid detergent market, with sales amounting to 324,256,000 pounds valued at \$104,711,000.

Growth of solid synthetic detergent sales (excluding shampoos) is leveling off with an increase of 1.7 per cent in tonnage and 1.2 per cent in value. Sales of solid detergents in the first half of this year edged up to 1,335,495,000 pounds, priced at \$287,997,000,

from 1,318,394,000 pounds and \$287,863,000 reported in the corresponding period of last year.

Synthetic shampoos, solid and liquid, were sold at the rate of 12,677,000 pounds and \$12,990,000 during the first six months of 1961, showing a 10.6 per cent growth in tonnage and 18.7 per cent increase in dollar value.

Total soap sales dropped 3.8 per cent in volume and 2.2 per cent in value during the period under review. Some 502,765,000 pounds of soaps, valued at \$151,764,000 were sold in the first six months of this year, compared

**Detergent and Soap Sales — First Half of 1961 and 1960**  
Thousands of pounds      Thousands of dollars

	1961	1960	1961	1960
Detergents, solid, excl. shampoos*	1,335,495	1,318,394	287,997	287,863
Detergents, liquid, excl. shampoos*	349,448	314,608	107,981	106,935
Detergent shampoos, liquid & solid*	12,677	11,462	12,990	10,946
<b>Total</b>	1,697,620	1,633,002	408,968	394,798
Detergents, solid, excl. shampoos, pkgd.	1,277,252	1,253,099	279,302	275,731
Detergents, solid, excl. shampoos, bulk	58,243	59,857	8,695	8,744
Detergents, liquid, excl. shampoos, pkgd.	40,532***	35,929***	104,711	96,291
Detergents, liquid, excl. shampoos, bulk	3,149***	2,644***	3,270	3,086
Soaps, solid	490,909	507,164	149,515	152,119
Soaps, liquid	11,856	15,384	2,249	3,025
<b>Total</b>	502,765	522,548	151,764	155,144
Bar toilet soaps**	291,762	276,636	102,444	100,197
Laundry bars, white	47,054	51,047	9,921	10,791
Laundry bars, yellow & other than white	16,478	27,282	1,668	2,366
Soap chips & flakes, pkgd.	11,273	12,232	3,822	4,089
Soap chips & flakes, bulk	32,871	39,143	3,422	3,776
Soap, granulated, powdered, sprayed, pkgd.	47,214	52,852	14,053	15,902
Soap, granulated, powdered, sprayed, bulk	23,857	26,890	2,637	3,009
Hand pastes and powders, incl. waterless hand cleaners	4,469	4,685	871	1,013
Paste & jelly, potash & other	4,054	4,699	538	606
Shaving soaps (stick, powder, cake)	889	985	586	636
Shaving cream (tube & jar, aerosols, and soapless)	10,485	10,197	9,476	9,649
Miscellaneous or other soaps, incl. shampoos, creams, jellies, pastes, powders, pkgd. & bulk	503	516	77	85
Soap shampoos, liquid, pkgd.	31***	37***	118	107
Soaps, liquid, excl. pkgd. shampoos	1,451***	1,886***	2,142	2,907
Scouring cleansers (not included in above totals)	202,580	185,504	27,559	24,845

\*Detergent shampoos are not included in liquid and solid figures and are no longer broken down into liquid and solid shampoos for reasons of non-disclosure.

\*\*Includes all toilet bars, medicated, synthetic, etc.

\*\*\*Expressed in thousands of gallons.



Periodic heat tests gauge color stability of ACINTOL® FA 3 Fatty Acid.

## Arizona takes extra steps to bring you the most color-stable fatty acid

Arizona offers the lightest fatty acid at its price and ACINTOL® FA 3 keeps its color characteristics through heat processing. It is heat-tested at several points during production for color stability. The finished product is stored in aluminum tanks, under a protective blanket of inert gas. Tank cars and shipping drums have the gas blanket and a special lining to prevent color degradation.

In addition to extreme lightness and color stability, ACINTOL FA 3 offers high fatty acid content. Specially suited to soap industry needs, it is an economic replacement for oleic acid.



For data sheets, write Arizona Chemical Company, 30 Rockefeller Plaza, N.Y. 20, N.Y.  
**World's Largest Supplier of Tall Oil Chemicals**  
ACINTOL® Tall Oil Products, ACINTENE® and ARIZOLE® Terpene Products

with 522,548,000 pounds and \$155,144,000 in 1960.

Solid soap sales volume declined 3.2 per cent to 490,909,000 pounds from 507,164,000 pounds reported in the previous semi-annual census. The only bright spot in the soap picture is presented by toilet bar sales, which grew 5.5 per cent in tonnage and 2.2 per cent in dollar value. In the first half of this year 291,762,000 pounds of toilet bars were sold for a total of \$102,444,000. This compares with sales of 276,636,000 pounds at \$100,197,000 in the first six months of 1960. However, it must be remembered that this figure covers not only soap bars, but also combination and synthetic toilet bars.

Sales of scouring cleansers, not included in the above statistics, climbed steeply, 9.2 per cent in tonnage and 10.9 per cent in value. The market for these products during the first half of 1961 was reported at 202,580,000 pounds, valued at \$27,559,000. Some 201,273,000 pounds of this total were sold in packaged form. Totals for the 1960 period were reported at 184,504,000 pounds and \$24,845,000.

#### MICSA Elects New Officers

The Midwest Industrial Chemical Salesmen's Association, Chicago, recently elected the following slate of officers for 1961.

President, Edward F. Lasek, Chicago district sales manager, chemical division, Tennessee Products and Chemical Corp.; vice-president, Paul Brna, branch manager George Lueders and Co.; secretary, Raymond E. Champlin, regional sales manager, Meer Corp., and treasurer, Robert W. Meidell, sales representative, Charles Pfizer and Co.

In addition, the following directors were chosen:

Past founder president, Stanley T. Olds, Hoffman-LaRoche, Inc.; membership chairman, John L. Slais, International Flavors & Fragrances, Inc.; finance chairman, Robert L. Williams, Givaudan-Delawanna, Inc.; member relation chairman, Joseph N. Doroskin, Heyden-Newport Chemical Co.; program chairman, Arthur R. McJermott, Nalco Chemical Co.; and publicity chairman, Melvin R. Ander, Sterwin Chemicals, Inc.

#### Washburn Names Robinson

T. F. Washburn Co., Chicago, recently appointed Robert Robinson head of technical services



Robert Robinson

for its full line of "Polymax" emulsion polymer and "Shelite" alkali dispersible resins raw materials. Mr. Robinson was formerly a salesman with T. F. Washburn Canada, Ltd., London, Ont. Prior to that he was associated with Alcan Industries, Ltd., Banbury, England, as technical service representative on aluminum pigments.

#### Eastern Housewares Show

The first Eastern Housewares Show, sponsored by New York City's Department of Commerce and Public Events, was held August 7-10 at the New York

Coliseum. The show, open to the trade only, is reported to have drawn approximately 6,000 buyers from wholesale, retail and department stores, discount houses, supermarkets, grocery and drug chains, as well as automotive supply stores and post exchanges.

The products of more than 200 exhibitors were displayed, including: O-Cedar, division of American-Marietta Co., Chicago, showing waxes, polishes and "Instant Torch" a foam-gel charcoal lighter in an aerosol can; Speco, Inc., Cleveland, O., with "Ice Rem Windshield De-Icer" and its complete "Rem" line; and A-M-R Chemical Co., Brooklyn, featuring aerosol insecticides and its line of "Mercury" fast drying spray paints, packaged in 16 ounce aerosol cans.

#### Stepan Increases Earnings

Stepan Chemical Co., Northfield, Ill., recently reported net income of \$914,460, or \$1.30 per share for the first six months of 1961, compared with \$751,229, or \$1.07 per share in the comparable period of 1960.

#### Puritan Names Bell

Puritan Chemical Co., Lawrence, Mass., recently announced the appointment of Ben Bell as vice-president in charge of sales.

Officers of the Midwestern Industrial Chemical Salesmen's Association, Chicago, for 1961, are shown with past president Stanley T. Olds, left. Officers are, left to right, president, Edward F. Lasek; vice-president, Paul Brna; secretary, Raymond E. Champlin; and treasurer, Robert W. Meidell.



*Versatile*



**PQ SILICATES  
USED IN  
DETERGENT  
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**PQ SOLUBLE SILICATES**  
SODIUM SILICATES • POTASSIUM SILICATES

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## **PQ SILICATES fit into all formulations**

**LIQUID • SPRAY DRIED • WET MIX • DRY MIX**

Balanced proportions of PQ silicate with your other builders make it possible to produce stable compounds which resist caking in solid mixes, or precipitation in liquids. In synthetics, the use of the right amount of the right silicate is very important, more so than in soap.

Don't overlook the opportunity to get optimum performance for your detergents and cleaning compounds at a minimum cost with the right silicate content. To get the best results in each case we shall be glad to discuss evidence from studies now being made at our research laboratories.



NAME	% RATIO %Na <sub>2</sub> O: %SiO <sub>2</sub>	%Na <sub>2</sub> O	%SiO <sub>2</sub>	BAUME 68°F.
N	1:3.28	8.90	28.7	41.0°
STAR	1:2.50	10.60	26.5	42.0°
RU	1:2.40	13.85	33.2	52°
C	1:2.00	18.0	36.0	59.3°
SS-C PWD	1:2.0	32.70	65.4	Anhydrous Powder
METSO GRANULAR	1:1*	29.50	28.7	Pentahydrate Metasilicate
METSO ANHYDROUS	1:1*	51.00	46.5	Anhydrous Metasilicate
KASIL #1	1:2.50	8.30	20.8	29.8°
KASIL #6	1:2.10	12.45	26.2	40.3°

\*Molecular Ratio

**PHILADELPHIA QUARTZ COMPANY**

1152 Public Ledger Building, Philadelphia 6, Pa.

Associates: *Philadelphia Quartz Co. of Calif., Berkeley & Los Angeles, Calif., Tacoma, Wash.; National Silicates Limited, Toronto & Valleyfield, Canada. Distributors in over 65 cities.*

PQ PLANTS: ANDERSON, IND.; BALTIMORE, MD.; BUFFALO, N. Y.; CHESTER, PA.; JEFFERSONVILLE, IND.; KANSAS CITY, KANS.; RAHWAY, N.J.; ST. LOUIS, MO.; UTICA, ILL.

### In Chemical Service Post

Chemical Service of Baltimore, Inc., Baltimore, Md., has announced the recent appointment



Joseph Williams

of Joseph Williams as assistant manager of the western division. He will give sales and marketing assistance to distributors in northern California.

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### Plans to Manufacture Soap

A business man in Sierra Leone, East Africa, is seeking private investment capital and technical assistance to establish and operate a soap manufacturing plant there. Negotiation with a firm experienced in the field is desired, under a joint venture arrangement.

The proposed plant will utilize domestically produced palm oil and require an investment of approximately \$67,200. Production and technical know how, and guidance as to type of equipment required for the project is sought. The business man is prepared to contribute \$19,600. Address communications to USOM, Freetown, Sierra Leone, East Africa.

— ★ —

### New Hercules Office

The Agricultural Chemicals Division of Hercules Powder Co., Wilmington, Del., recently announced the establishment of a new district office at Louisiana, Mo., to handle sales and service of its agricultural products. The

new office will service a 14 state area with agricultural chemicals, including pesticides and plant foods.

Appointed to staff the new district office were:

Henry F. Pierce, district manager; Don M. Allison, senior technical sales representative; Dr. Robert E. Ogle, senior technical sales representative; Harry W. Cannon, technical sales representative; and Richard Grimm, sales correspondent.

— ★ —

### Shulton Appoints Munden

The appointment of Elmer J. Munden to the newly created position of field sales supervisor, midwestern branch, for the toiletries division of Shulton, Inc., Clifton, N. J., was announced recently by Clyde A. Brown, Jr., national sales manager.

Mr. Munden joined Shulton in 1952 as a sales representative and has most recently serviced accounts in Missouri and part of Kentucky.

— ★ —

### Wyandotte Qtr. Earnings

Wyandotte Chemicals Corp., Wyandotte, Mich., recently reported second quarter sales of \$24,575,000, compared with \$24,369,000 for the same period in 1960.

Earnings were \$1,225,000, or 86 cents a share, as compared with \$1,254,000, or 79 cents a share, a year ago.

Sales reached a new high of \$46,723,000, for the first half of 1961, topping the \$46,644,000, in the first half of 1960. Earnings were \$1,717,000, equivalent to \$1.20 a share, compared with \$2,024,000, or \$1.24 a share for the first half of 1960.

Francis Chapman



Louis Sesso



Donald Whyte



### P & G Sets Two Records

Procter & Gamble Co., Cincinnati, achieved the highest sales and earnings in its 124 year history during the fiscal year ended June 30, it was announced recently.

Consolidated net sales of the company and its subsidiaries rose seven per cent to \$1,511,904,779 from \$1,441,548,293 in the preceding fiscal year. Consolidated net earnings rose nine per cent to \$106,632,801, from \$98,078,076 in the year to June 30, 1960. After adjusting for a two for one stock split in March, the earnings for the latest period equaled \$2.56 per common share, compared with \$2.37 per share for previous year.

— ★ —

### Johnson Expands Research

S. C. Johnson & Son, Inc., Racine, Wis., recently announced appointments to three major posts in its research and development division. Donald E. Whyte, who joined the firm 15 years ago, and most recently served as service products development director, has been named applied research director. He is succeeded by Louis M. Sesso, formerly a development supervisor.

Francis E. Chapman has been appointed director of the newly created international products development department, established to provide specialized services required by the growth of the company's international operations. He formerly supervised an international section within the household products development division.



## HIS

Shoe polish with lasting lustre . . . polish for his car. Products that are stable in the can, sparkling on the finish—because they contain ethanolamine dispersing agents.

And gentle ethanolamide emulsifiers, derived from ethanolamines, assure that his shaving cream lathers just right, wilts whiskers — yet leaves his face silken-soft. Ethanolamides, too, add the lathering qualities he likes in cream shampoos.

## YOURS

Chemical's mono-, di-, and triethanolamines are manufactured by an improved process assuring high quality and purity. Write or phone for specifications or technical assistance in formulating your ethanolamides.

## HERS

Cosmetics that are smooth, stable, safe — thanks to the dispersing action of non-irritating ethanolamines. They're ideal for liquid shampoos with perfect lather bubble size, opacity, body and hair conditioning effect. As suds boosters, they add muscle to her household detergents and soaps. And ethanolamine emulsifiers keep floor and furniture polishes smoothly blended.

Allied Chemical's high-quality ethanolamines for your products for **HIM** and **HER** . . . and **INDUSTRY** — in institutional cleaners, textile softening agents, wool scouring compounds, cotton washing formulations. Allied



**NITROGEN DIVISION**  
Dept. EA12-27-3, 40 Rector St., New York 6, N.Y.

### Sandoz Appoints Seifert

Hans Seifert, formerly a technical sales representative, has recently been appointed sales man-



Hans Seifert

ager of the chemical division, Sandoz, Inc., New York. He is responsible for all chemical sales of the company.

Since 1951 Mr. Seifert has been active in the development and introduction of new chemical products for the company. From 1946 to 1951, he was associated with Sandoz, Ltd., Basle, Switzerland.

—★—

### Colgate Names Ratliff

Ken Ratliff has been appointed sales supervisor for the Houston (Tex.) division of Colgate-Palmolive Co., New York, it was announced recently. Mr. Ratliff, with the firm for seven years, supervises eight salesmen in that area.

—★—

### Economics to Build

Economics Laboratory, Inc., New York, announced construction of a half-million dollar building in Mendota Heights, a St. Paul suburb.

The building will house a three-story pilot plant and a two-story laboratory, totaling 25,000 square feet, it was stated. Completion of the building is scheduled for January.

—★—

### Allied Chemical Changes

The National Aniline Division of Allied Chemical Corp., New York, recently announced the

following changes: Richard C. Engert has been transferred from the New York office to the Atlanta sales branch, as has H. A. McKibben, Jr., who was transferred from the Charlotte, N. C., laboratory; and Norman H. Russo has been transferred from the New York office to the Chicago sales branch.

It was also announced that William F. Schmidt has been appointed sales supervisor, in charge of chemicals, in the Chicago sales branch, and Lamar R. Smith has been appointed a salesman in the Greensboro, N. C., sales office.

—★—

### Vim Names Two

Vim Laboratories Co., Washington, D. C., recently announced two appointments in production and research. Gilbert Hall has been named plant and production manager and will direct new manufacturing facilities recently established near Frederick, Md. Mr. Hall was formerly aerosol supervisor for Revlon, Inc., New York.

Ralph Higgins has been named director of research and development. Prior to joining Vim, Mr. Higgins was chief chemist for Morton Manufacturing Co., Lynchburg, Va.

—★—

### Pitt-Consol Names Two

Pitt-Consol Chemical Co., Newark, N. J., a subsidiary of Consolidation Coal Co., Pittsburgh, recently announced that J. H. Rhines has been named general manager of sales and R. J. Reale has been appointed manager of cresylic acid sales. Mr. Rhines was formerly manager of rubber chemical sales and Mr. Reale was a technical sales representative prior to his appointment.

R. J. Reale



J. H. Rhines



### Fleuroma Names Kaufman

Fleuroma, Inc., Long Island City, N. Y., recently announced the appointment of Jerome G. Kauf-



Jerome Kaufman

man as director for chemical research and production. Dr. Kaufman was formerly director of the research laboratory. In his new position he will further integrate the creation of new and original aromatic chemicals with pilot and plant production, it was reported.

—★—

### New Bixon Finish

A new, all-white, non-yellowing protective floor coating, tradenamed "Perm-A-Seal," was announced late last month by Bixon Chemical Co., New York. The new floor coating can be washed with neutral cleaners and is not removed by them, according to Bixon. Acid cleaners are not necessary to remove "Perm-A-Seal," its maker states. The finish is removed with a heavy duty stripper to which ammonia is added.

—★—

### Award to Caled Products

Caled Products, Inc., Brentwood, Md., manufacturer of soaps and allied products used in dry cleaning and laundry plants, was recently awarded a second prize by the Advertising Specialty National Association for outstanding use of advertising specialties in business promotion. The award was presented at ASNA's general membership luncheon during the 58th annual convention, held August 24, at the Palmer House, Chicago.



*Win her approval.*  
**perfume your detergent with Givaudan**  
***Tergescents*<sup>®</sup>**

Women are always "fragrance-conscious"—a pleasant scent is often the prime factor in her repeat purchases. You can key your household detergents to her preferences with low-cost Givaudan *Tergescents*.

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**SOAP and CHEMICAL SPECIALTIES**

### Geigy Names Malec

Geigy Industrial Chemicals, a division of Geigy Chemical Corp., Ardsley, N. Y., has just ap-



Donald W. Malec

pointed Donald W. Malec as sales representative with headquarters in Philadelphia. He will represent the division in eastern Pennsylvania, southern New Jersey, Maryland, Delaware, and the District of Columbia.

Mr. Malec was formerly associated with Armour Chemical Co., Chicago, as a field representative in the New York-New Jersey area. He was also associated with Nopco Chemical Co., Newark, N. J., in the research department.

—★—

### New Army Insect Repellent

The Army is distributing a new insect repellent called "Deet," to soldiers in the field. "Deet," meta isomer of diethyl-toluamide, is said to be greaseless, smell "relatively pleasant" and repel most insects including mosquitos, fleas, chiggers, ticks, deerflies and biting gnats. It is also claimed to work in heavy rainfall and extreme heat.

—★—

### P & G Expands Warehouse

Procter & Gamble Manufacturing Co., recently announced plans to build a 130,000 square foot warehouse facility at St. Louis, Mo. The building, scheduled for completion in the spring of 1962, will be served by a double railroad siding, providing for the simultaneous loading or unloading of ten

railroad cars. Truck access will be by a series of 14 overhead loading doors.

The warehouse will contain almost three acres of floor space which will be used for storage of products made at the St. Louis plant and for other P & G products manufactured elsewhere.

—★—

### DuBois Changes

DuBois Chemicals, Inc., Cincinnati, recently announced the appointment of Elmer C. Korte as chief chemist of the company's East Rutherford, N. J. plant. He succeeds Sherman H. Palmer who has been appointed branch manager of DuBois' Dallas plant, a position formerly held by John T. Salter, who has been named production manager of all manufacturing facilities.

It was also announced that Francis J. Clancy and Richard A. Tarnowski have been appointed assistant secretaries of the firm.

—★—

### Richardson Olin V-P

Derek Richardson has been appointed to the newly created post of vice-president for marketing of the chemicals division of Olin Mathieson Chemical Corp., New York, it was announced recently. Mr. Richardson joined the corporation in 1939 and was a member of the chemicals division until 1958, when he transferred to the metals division as vice-president for aluminum sales.

Derek Richardson



### Welter a District Manager

Raymond F. Welter has recently been appointed district manager of a newly created southern



Raymond Welter

district office for Antara Chemicals, a division of General Aniline & Film Corp., New York. The new office will be located at 3939 Essex Lane, Houston 6, Tex., and cover Mississippi, Louisiana, Oklahoma, and Texas.

Mr. Welter joined Antara in 1953 as a sales engineer in New York. He moved to Houston in 1959 as a sales engineer for that area.

—★—

### New Algaecide Formulation

"Formula D-130," a new algaecide formulation composed of a mixture of chlorinated phenolic compounds has been prepared for use in non-potable water systems by Bird-Archer Co., Philadelphia water treating consultants.

Used in cooling towers, air conditioning systems, ammonia condensers and industrial water spray ponds, the new product is said to kill off already formed growths, and prevent new growth. "Formula D-130" is supplied as a concentrate, and may be added to the system at different feed rates to cope with light or heavy infestation, or to prevent the appearance of the organisms, it is reported.

Shipped in 100, 200, or 400 pound drums "Formula D-130" is said to contain no mercury, copper or iodine, and is compatible with water treatment chemicals.



## Child-mild shampoo with Olin ethanolamines



She's a touchy customer, so treat her gently. Baby her hair and skin with gentle, rain-soft shampoos. A tall order? Not if you base your formulations on emulsions made with Olin ethanolamines.

Mild and essentially neutral, Olin ethanolamines are ideal emulsifying agents for shampoos and cosmetic preparations. The ethanolamine soaps are softer and they extract less oil from the skin. Add their resistance to hard water and their water-retaining

powers and you'll see why so many manufacturers employ Olin ethanolamines in their formulas.

Bulk and drum stocks of Olin ethanolamines (mono-, di-, and tri-) are located near you. For product specifications or samples, phone or write OLIN MATHIESON, Organic Chemicals, 745 Fifth Avenue, New York 22.

Ethylene Oxide • Ethylene Glycols • Polyethylene Glycols • Propylene Oxide  
• Propylene Glycols • Polypropylene Glycols • Ethanolamines • Glycol Ethers  
• Surfactants • Ethylene Dichloride • Propylene Dichloride

250

ORGANICS DIVISION

**Olin**

## P & S Names Hagelund

Piatt & Smillie Chemicals, Inc., St. Louis, recently announced the appointment of Folmer Hagelund as sales vice-president in charge of the mid-west division.



Folmer Hagelund

lund as sales vice-president in charge of the mid-west division. Mr. Hagelund, who was formerly associated with Lien Chemical Co., Franklin Park, Ill., joined P & S in 1958. He coordinates promotional and sales work for the company in the introduction of new detergents, floor finishes, and related maintenance and sanitation chemical specialties.

## Brillo Increases Earnings

Brillo Manufacturing Co., Brooklyn, recently reported earnings per share for the six months ended June 30th rose four cents to \$1.11, as compared with \$1.07, for the same period in 1960. Net sales were \$12,742,952, down from the \$12,851,075 recorded in the same period of the previous year. Net income was reported at \$480,181, up from the \$462,802 listed for the first six months of 1960.

## IFF Booklet

International Flavors & Fragrances, Inc., New York, has published a 16-page booklet entitled, "Flavor and Fragrance the World Over." It describes the overall corporate set-up, including pictures of IFF facilities throughout the world.

The booklet is divided into sections including "Chemical Research," "Raw Materials - Natural

and Synthetic," "The Creative Art," "Technical Services," and "Production and Distribution." Technical services shown encompass the blending of a fragrance into a soap formulation for aging, testing and evaluation.

## Top Advertisers in 1960

In a recent report published by the Television Bureau of Advertising, New York, Procter & Gamble Co., Cincinnati, was second on the list of the top 100 national advertisers of 1960, with a total expenditure of \$109,562,745.

In fourth place, with a total expenditure of \$54,824,858, was American Home Products Corp., New York. Sixth and eighth, with total expenditures of \$53,518,182 and \$41,411,194, respectively, were Lever Brothers Co., and Colgate-Palmolive Co., both of New York.

## Chemical Company Formed

Newly incorporated Baldwin-Montrose Chemical Co., Newark, N. J., is the result of a merger of Montrose Chemical Co., Baldwin Rubber Co., and Centlivre Brewing Corp.

Ira Vandewater, president, and C. E. Griffith, vice-president of R. W. Greeff & Co., New York, have been elected directors of the new firm.

## Baird to Make Sorbitol

Baird Chemical Industries, Inc., New York, recently announced the construction in Peoria, Ill., of a \$1,500,000, 20 million pound annual capacity plant for the production of sorbitol.

New two-level building adjoining Hodag Chemical Corp., Skokie, Ill., facilities. Unit houses an automatically controlled 1000 gallon electrically heated reactor, expected to double the firm's production of surface active chemicals. Additional facilities will be installed in the new building, which is the third major plant expansion for the firm.



## Rexall Elects Hallett

Roland F. Hallett has been elected vice-president and treasurer of Rexall Drug and Chemical Co., Los Angeles, it was announced recently. Mr. Hallett succeeds Walter T. Lillie who is retiring, but will remain affiliated with the company as chairman of the board of Owl Drug Co., a wholly-owned subsidiary. Benjamin H. Dorman, with Rexall since 1940, succeeds Mr. Hallett as general counsel.

## Detergents in Honduras

The Inter-American Development Bank recently announced the approval of a loan, equivalent to \$360,000, to help finance the installation of a chemical plant for the manufacture of detergents and other products in Honduras.

## Alcolac Name Change

American Alcolac Corp., Baltimore, Md., has changed its name to Alcolac Chemical Corp. The new name has been selected to reflect more appropriately the scope and nature of the firm's activities as a manufacturer of chemical intermediates and surface active agents, it was reported.

## Revlon Earnings Up

Revlon, Inc., New York, recently reported a net income of \$5,500,000, or \$1.05 earnings per share, for the first six months of 1961. This was a six per cent gain over net income in the first half of 1960 of \$5,200,000, or \$1 per share. Net sales in the 1961 period were \$69,200,000, up 10 per cent over the \$62,900,000 in the first half of 1960.

## HEYDEN TELECAST: NEWS IN SODIUM BENZOATE

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- OPENED BY HEYDEN.
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Cover odor N-22(PE)  
Cover odor G No. 1954(A)  
Cover odor P. No. 1954(S)  
Cover odor P.C. No. 3127(S)  
Cover odor P.D. No. 250(P)  
Cover odor W.A.S. No. 300(W)  
Cover odor W.P. No. 400(W)  
Rubber Deodorant No. 56  
Cover odor A.D.H. No. 200(A)  
Cover odor J.W. No. 2404(W)

Cover odor R.C. No. 604(PE)  
Cover odor SASS. No. 1954(A)  
Cover odor S.T. No. 275(P)  
Floratyl Bouquet No. 1009(I)  
Cover odor O.B. No. 1714(I)  
Eugenol Technical(I)  
Cover odor N-43(I)  
Cover odor N-4(1) (PE)  
Cover odor G.R. No. 27(PE)  
Nutralco No. 350(IN)



### SOAP

Oil Bouquet C No. 613  
Oil Jasmin No. 613  
Oil Mimosa No. 615  
Oil Wild Rose No. 55  
Imitation Geranium S



### AEROSOL BOUQUETS

Oil Gardenia No. 3125  
Mint Bouquet No. 3121  
Oil Sweet Pea No. 3123  
Oil Wistaria No. 3124  
Apple Blossom No. 3122  
Oil Bouquet E.T. No. 3126



### SHAMPOO ODORS

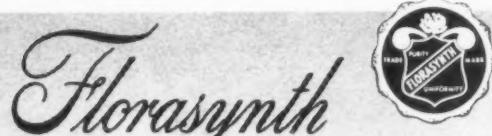
Oil Bouquet TV No. 55  
Oil Clover No. 888  
Oil Corylopsis No. 55  
Oil Bouquet H.O. No. 8267  
Oil Bouquet M. No. 55  
Oil Bouquet Narcissus No. 55  
Oil Bouquet Wild Rose No. 55  
Oil Bouquet Almond No. 8262



### IMITATION ESSENTIAL OILS

Bergamot No. 55  
Citronella No. 55  
Geranium No. 55  
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SOAP and CHEMICAL SPECIALTIES

### Dunham President of PAAA

William P. Dunham was recently elected chief executive officer of the Premium Advertising



William P. Dunham

Association of America, Inc., a new full-time post, with headquarters at 75 East 55th St., New York. He succeeds Gordon C. Bowen, Association president for eight years.

Mr. Dunham, formerly with General Foods for the past 14 years, has been vice-president and director of the PAAA and chairman of its research committee.

### P & G Buys W. German Site

Procter & Gamble Co., Cincinnati, recently announced the purchase of an industrial site at the city of Worms, West Germany. Construction of the plant for its West German subsidiary, Procter & Gamble, G. m. b. H. will begin shortly. Procter and Gamble has two other Common Market subsidiaries, one in France, and another in Belgium.

### Dubow Acquires Alpha

Dubow Chemical Corp., Freeport, L. I., recently announced the acquisition of Alpha Chemical Products Co., College Point, L. I. The firm, purchased through the sale of Dubow stock, will become a wholly owned subsidiary.

### Cosmetic Chemist Meeting

The New York Chapter of the Society of Cosmetic Chemists held its first meeting of the fall

season on Wednesday, September 13, at the Hotel George Washington, New York. The program was to consist of a discussion of the "Legal Status of the Cosmetic Chemist in His Company Affiliation." The rights and viewpoint of the individual and of management were discussed.

### Suter Geigy President

Charles A. Suter has been elected president of Geigy Chemical Corp., Ardsley, N. Y., succeed-



Charles A. Suter

ing William F. Zipse, president of the firm since 1943. Marking his 58th year with Geigy, Mr. Zipse assumes the position of chairman of the executive committee.

Mr. Suter had completed 10 years with J. R. Geigy, S. A. in Switzerland prior to joining the United States firm in 1941. Elected vice-president and a director in 1943, he has been executive vice-president since 1950.

### New Shell Alkylate Plant

A new detergent alkylate plant, the first of its kind in Australia, recently began production at Corio, Victoria. Established by Shell Chemical (Australia) Pty., Ltd., the 7,000 ton annual capacity unit is part of a large refinery of the Shell Refining (Australia), Pty., Ltd., in the district.

New detergent alkylate plant installed at Corio, Victoria, by Shell Chemical (Australia) Pty., Ltd. Linked with a refinery of the Shell Refining (Australia) Pty., Ltd., the new plant has an annual capacity of 7,000 tons. Storage tanks are at the left in photograph; hydro de-sulphurizing plant is at right.



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cleans up where others quit!**

Revolutionary in the field of detergents, WOW is a Heavy Duty All-Purpose Liquid developed by Borne to lick tough cleaning jobs as nothing has before.

Its entirely new detergent sulfonate\*—molecular structure gives WOW a tremendous thirst for grease, wax and grime . . . a positive improvement over solvent-based and dodecyl benzene sulfonate formulated detergents.

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\*Pat. Pend.

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**SOAP and CHEMICAL SPECIALTIES**

### Automated Soap

(From Page 177)

complished within the most favorable zone, it will be necessary to determine the minimum point. Further, it will be necessary to preset the index very accurately at a given distance from the minimum point.

The position of the minimum point is influenced, among other things, by the temperature and the fat composition. Especially in the fat composition, small variations are common. Such deviations and variations, however, can be observed very clearly, in the position of the minimum point. This is a very likely reason why, in spite of very accurate adjustment of the fitting conditions by means of analysis and subsequent corrections, in some kettle installations, highly varying results may be obtained with different batches. The only possibility of obtaining the high precision required in the fitting stage seems to be to adopt the continuous viscosity-controlled fitting method.

During work at a constant level, the composition of the mixture in the fitting column can be kept very uniform. Table 3 refers to a run at index figure 44, i.e., at a distance of seven scale divisions from the minimum point. During the period in which samples were taken, i.e., about four hours, the variations in electrolyte content did not exceed 0.02 per cent, or  $\pm 0.01$  per cent.

### Plant Requirements

To enable the control system described here to work at a high degree of accuracy and safety which is one of its features, some requirements must be met with respect to the plant in which it is used. The most important of these requirements are:

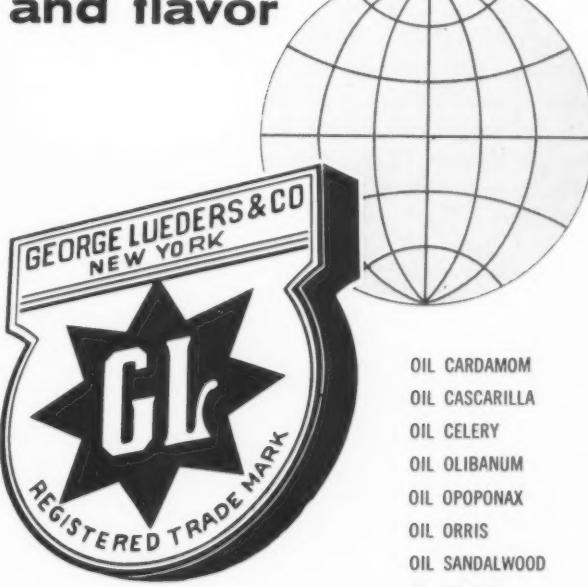
- (1) The temperature has to be kept constant. This can be done with sufficient accuracy by employing the standard temperature control instruments on the market.

Table 3. Operation at fixed index setting.

Recorder			Fitting Column				Separator	
Time	Index	Distance from min.	Composition, % by vol.				Neat soap NaOH+ NaCl%	Nigre Percentage of fatty acids
			Neat soap	Nigre	Spent lye	NaOH+ NaCl%		
17.15	44	7	85	15	0	1.16	0.42	28.5
17.40	37	0	—	—	—	1.00	—	—
19.00	44	7	—	—	—	1.15	0.43	29.2
20.00	44	7	85	15	0	1.16	0.41	28.2
21.00	44	7	85	15	0	1.17	0.43	30.2

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(2) The system must be hermetically closed so as to prevent air from getting mixed with soap. The "Centripure" method excludes the air by using the fully hermetic De Laval separators. As there is an overpressure in these separators, no admixture of air can take place.

(3) The fatty-acid content must not vary. A constant fatty-acid content can be obtained with the "Centripure" method by separation of the washed soap to be introduced to the fitting section, in highly efficient centrifugal separators.

#### Summary

So far, fitting has been the most sensitive operation in soap making. With the constant composition system, however, it has been made an exact working operation. It can be guided with ab-

solute precision and is independent of rules of thumb and personal judgment.

This control system makes it possible to perform the fitting at an exactly determined point in the McBain diagram, for which purpose the minimum point is used as the guide point. The "minimum point" is a new concept adopted in this field.

With this control system, saponification can be accomplished with an exact, predetermined excess of alkali, so that one can be sure of reaching the desired degree of saponification without unnecessary losses of alkali.

The control system is of special interest where large production units are concerned. In such cases it may be almost impossible to re-work the production, should the quality happen to be beyond the specified limits. The great precision of the manufacturing process ensures a product of an extremely uniform quality.

#### Mrs. George Moran Dies

Mrs. George F. Moran, vice-president of Moran Brush Manufacturing Co., Hamden, Conn., died Aug. 9. She was the widow of George F. Moran, first president of the firm after its incorporation.

James P. Cook was recently appointed to take charge of sales in the North Central States for the Janitor Supply Division of Murphy-Phoenix Co., Cleveland hand soap maker. Prior to serving as a special representative for the past year, Mr. Cook was on the sales staff of Skil Corp., Chicago, and Lufkin Rule Co., Saginaw, Mich.



tane). Data sheets and brochures on these materials are available.

#### New Amador Plant

Amador Chemical Corp., Stockton, Calif., producers of chemical specialties, recently moved into a new plant at 1640 North Broadway. The new plant, which is situated on one acre of ground, consists of three buildings. One building houses general and executive offices and warehouse. Amador's emulsification plant operates in the second building, and the third unit is for production of varnishes and solvent waxes. In addition to producing a number of special emulsions for sanitary supply distributors, Amador also makes synthetic polymer and wax based floor finishes, cleaners, paint strippers and sealants.

**Soap grinder dispenser** recently introduced by Franklin Soap Dispenser Co., Chicago, holds two 1 1/4 ounce bars of soap, enough for up to 1400 people to wash their hands, the company states. A turn of the knob operates cutting disc which pulverizes soap into a fine powder. Large key at top locks soap spindle in place. Dispenser is refilled after end of bar is visible in lower window. Soap is available in pure castile or with "G-11" (Hexachlorophene U.S.P.).

George Moran died in 1951.

Mrs. Moran is survived by two daughters, Lilian Moran, the firm's president, and Mrs. Edward Mulligan.

#### New Dermal Absorption Aid

A new aid to percutaneous adsorption was introduced recently by Robeco Chemicals, Inc., 25 East 26th St., New York 10. "Robane" is a purified form of hydrogenated squalene, known as hexamethyl-tetracosane or squalane. Its presence in a topically applied personal product will speed and will deepen the percutaneous absorption of any active principle incorporated in the formulation, the manufacturer claims. Use of "Robane" in medicated skin cleansers, shampoos, or toilet bars is suggested.

Robeco's line also includes "Carolate" self-emulsifying spermacetamide, which is suitable for use in shampoos, bath preparations and a number of other toiletries. Other specialty chemicals made by the firm are squalene and pristane (tetramethylpentadecane, norphy-



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Chemical Engineer and Chemist  
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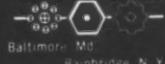
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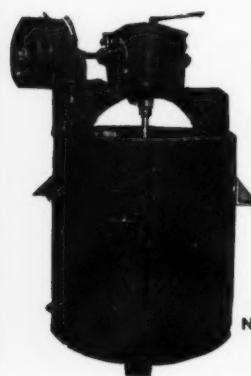
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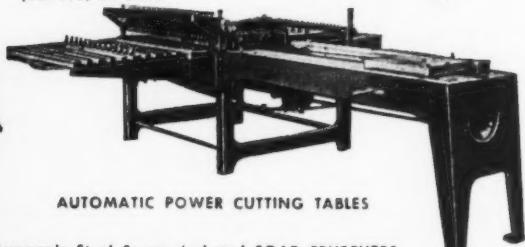
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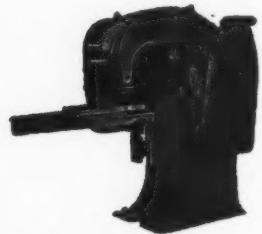


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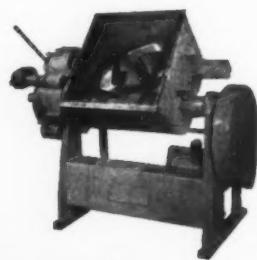
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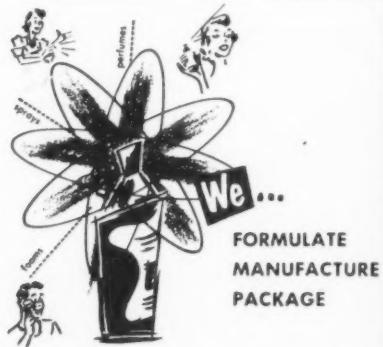
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and installation of equipment in new plants. Address Box 655, c/o *Soap*.

**Expert Soap Maker:** In the mfg. of toilet and laundry soap and cleaning compounds, also recovery of glycerine. Will instruct and teach the making of these products and all soap plant operations. Address Box 656, c/o *Soap*.

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**Plant Chemist:** Also mfg. supervisor experienced industrial and institutional cleaners, chemical spe-

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**Mgr. Soap Production:** Over 25 years experience in production of toilet, laundry, coconut and glycerine soaps. Very well versed in manufacturing of detergents and all related fields. Good organizer. German background. Fluent in German, Spanish. Newcomer seeks employment. Address Box 646, c/o *Soap*.

**Chemical Salesman:** 12 years experience. Currently selling cosmetic, chemical specialty, pharmaceutical, aerosol and perfume accounts in New York, New Jersey, Philadelphia, Baltimore and New England. Strong product development and new material background in all types of products. Technical and business education. Address Box 647, c/o *Soap*.

**Soap Maker:** British works manager and soap maker. Resident in U.S.A. Has 25 years experience in all classes of soaps, seeks interesting and progressive position. Address Box 660, c/o *Soap*.

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**Soap Plant Wanted:** In Florida, preferably Miami area, going manufacturing soap plant, or any, or combination of—beauty and barber supply house, janitorial supply house, drug house. Address Box 662, c/o *Soap*.

## Miscellaneous

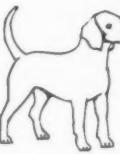
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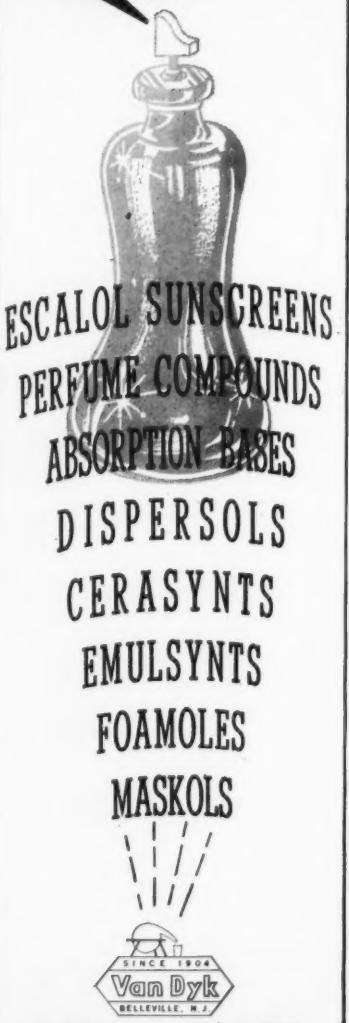
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## For Sale

**For Sale:** 2 Proctor & Schwartz dryers, steam coils, complete with steel trays, no motors. \$1500 each. Rozilda Laboratories Inc., 814 Madison St., Hoboken, N. J.

**For Sale:** Houchin-Aiken #4 and Houchin Empire State foot presses for manufacturing para deodorant blocks or soap. Reconditioned, will sacrifice. Box 181, Elmwood 10, Conn.

**For Sale:** Bullovak 42" x 120" dbl. drum dryers, Sharples #16V inconel soap centrifugals, Hope single piston stainless filler. Perry Equipment Corp., 1410 N. 6th St., Phila. 22, Pa.

**For Sale:** By I. E. Newman, 818 W. Superior, Chicago, Ill., CH-3-1425. Mixers. Marion-Munson, sizes 50# to 10,000#; Crutchers—1,000-8,000#; Wrapper Type S; Auto Cutting Table; Bucket Elevators, Mills, Cutters, Crushers, Soap Equipment. Prices on request.

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## Sanitation Show Scheduled

The 6th annual Sanitation Maintenance Show will be held September 26-28, at the Sheraton Hotel, Philadelphia. The Institute of Sanitation Management, sponsor of the exhibit and conference, reports that over 100 exhibitors will participate.

— ★ —

## Detergent-Proof Polish

A new "Permacrylic" floor finish, washable with detergents and water, recoatable, and removable by a mildly acidic stripping compound, has just been placed on the market for commercial use by Simoniz Co., Chicago. Simoniz has trade-named this novel floor care system "Lock and Key". A household version will be introduced shortly, according to the manufacturer.

Stable to alkali and water, the "Permacrylic" finish can be washed with hot water and detergents and re-waxed from four to ten times prior to removal, Simoniz claims. To remove the coating, Simoniz supplies an acid and solvent formulation, claimed to be safe on a wide range of commonly used floor surfaces.

In addition, the new product is said to combine long life with high gloss and clarity and improve in appearance with multiple coats.

"Lock and Key" floor coating is described as an acid-sensitive combination of a new terpolymer with synthetic resin solutions and wax emulsions.

— ★ —

### New Cowles Headquarters

Cowles Chemical Co., Cleveland manufacturers of industrial chemicals, recently moved its executive headquarters to 12,000 Shaker Blvd. Cowles moved to a more suburban location after 20 years at the same address, 7016 Euclid Ave. in downtown Cleveland.

The new modern glass and steel structure is built on stilts, with three air-conditioned floors above the ground floor entrance. Space under the building provides for covered parking of employees' automobiles. The office of Cowles' president, R. F. Huntley, reception room and executive offices are on the fourth floor. Functional space for accounting and order departments is on the third floor. The second floor will be leased awaiting further expansion by Cowles.

In addition to its new office building, Cowles has undertaken a major program of expansion which includes a new production plant in Joliet, Ill., and greatly expanded organic facilities.

Company sales volume, which began a steady increase in 1956,

New headquarters of Cowles Chemical Co., Cleveland, at 12000 Shaker Blvd., is modern glass and steel structure built on stilts. Space under the building provides parking for automobiles of employees.



SEPTEMBER, 1961



R. F. Huntley, Cowles president, right, guides Art Todd (center) of Lincoln Electric through new facilities during open house ceremonies. With Mr. Huntley and Mr. Todd is Frank Black, manager of Cowles' chemical division.

continues. The first six months of 1961 were almost 7 per cent above last year's record first half.

### R. Henry Morris III Dies

R. Henry Morris III, 64, formerly special assistant for industrial liaison to the Director of the U. S. Department of Agriculture's Eastern Utilization Research and Development Division, Wyndmoor, Pa., died Aug. 22. He recently retired due to ill health.

### ALCC Names Johnson

Arkansas Louisiana Chemical Corp., Shreveport, La., has appointed Donald R. Johnson a chemical sales representative. He will handle the sales of chlorine, caustic soda and hydrochloric acid in Alabama, Mississippi, Georgia, Florida and South Carolina.

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## COMING MEETINGS

American Hospital Association, 63rd annual meeting, Convention Hall, Atlantic City, N. J. Sept. 25-28.

American Oil Chemists Society, national meetings, Pick Congress Hotel, Chicago, Oct. 30-Nov. 1, 1961; Roosevelt Hotel, New Orleans, May 7-9, 1962.

Canadian Manufacturers of Chemical Specialties Association, fourth annual meeting and conference, Royal York Hotel, Toronto, Oct. 30-Nov. 1.

Chemical Industries Exposition, Coliseum, New York, Nov. 27-Dec. 1.

Chemical Specialties Manufacturers Association, 48th annual meeting, Roosevelt Hotel, New York, Dec. 4-6, 1961; 48th midyear meeting, Drake Hotel, Chicago, May 14-16, 1962.

Chemical Specialties Manufacturers Association, Western golf tournament, Itasca Country Club, Itasca, Ill., Sept. 19.

Chicago Perfumery, Soap & Extract Assn., luncheon, Sheraton Towers, Oct. 10; Thanksgiving stag party, Furniture Club, Nov. 14; annual business meeting (luncheon), Sheraton Towers, Dec. 12; Christmas Ball, Conrad Hilton Hotel, Dec. 16.

Entomological Society of America, ninth annual meeting, McAllister Hotel, Miami, Fla., Nov. 27-30.

Federation of European Aerosol Associations, 3rd International Congress, Lucerne, Switzerland, Oct. 3-8.

National Agricultural Chemicals Association, annual meeting, Homestead, Hot Springs, Va., Oct. 29-Nov. 1.

National Hotel Exposition, Coliseum, New York, Nov. 6-9.

National Pest Control Association, annual convention, Deauville Hotel, Miami Beach, Fla., Oct. 16-19.

National Sanitary Supply Assn., 39th annual convention and trade show, Coliseum, New York, May 26-29, 1962.

New York Premium Show and Premium Advertising Conference, New York Coliseum, Sept. 25-28, 1961.

Packaging Institute, 23rd annual national packaging forum, Biltmore Hotel, New York, Oct. 18-20.

Packaging Machinery Manufacturers Institute, (PMMI) fourth annual show, Cobo Hall, Detroit, Nov. 7-10, 1961.

Sanitation Maintenance Show and Conference, 6th annual, Sept. 26-28, Hotel Sheraton, Philadelphia.

Society of Cosmetic Chemists, annual seminar, Barbizon Plaza Hotel, New York, Sept. 26-27; annual meeting, Biltmore Hotel, New York, Nov. 28; Chicago Chapter, monthly meetings, Henrion's Restaurant, Merchandise Mart, Oct. 10, Nov. 14.

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# tale ends

**A**CCORDING to the Soap Association "Digest" quoting from figures presented in "Coconut Situation," published by the Food & Agriculture Organization of United Nations, world soap production in 1959 was 5,350 metric tons. That's about 12,000,000 pounds. Actually, we have a hunch that three zeros were omitted by error and that the real figure is 5,350,000 tons. The production of toilet soap alone in the U. S. is over 600 million pounds annually.

\* \* \* \* \*

According to a report from England, a French woman recently commenting on her trip to the United States stated that "Soap is provided free (by American hotels) for no explainable reason. . . . Come to think of it, just why do American hotels give free soap to guests? Or better yet, why don't European hotels do the same? They supply toilet paper (tough, harsh and stiff), but nonetheless, toilet paper, towels, running water, etc. The answer is probably the cost. Soap in America is cheap!

\* \* \* \* \*

For listless spirits and a tired body after a hard day's work, nothing refreshes and stimulates flagging spirits like a bath and a change of clothing. Thus spoke the Rev. Dr. Herbert Spaugh of Charlotte, N. C. ". . . I have never found a better tonic than the one just prescribed. No man or woman can afford to get too tired to clean up. Cleaning up the body tends to clean up the mind . . . It has a remarkable psychological effect." To this sensible advice of the clergyman, we say, "Amen."

\* \* \* \* \*

One of our spies in Jidda, Saudi Arabia, has passed word over the grapevine that a factory for the manufacture of "Tide" is under construction in that thriving metropolis. The machinery will come from Italy and the raw materials will likewise be imported. Principal promoter of the venture is Procter & Gamble (get this) "an agency of Mohamed Ali Abudawood & Brothers, King Abdulaziz St., Jidda, Saudi Arabia."

\* \* \* \* \*

A leading motel in Watertown, N.Y., supplies "Vel" to its guests in place of regular toilet soap bars. The city happens to be in a real hard water area and the use of the synthetic detergent bar is really a relief to anybody who has struggled to work up a lather with plain soap. Guests use the synthetic bar not only to wash themselves but also to do such small-time laundry as is common to travelers.

\* \* \* \* \*

Correspondents' requests to know what kind of soap and shampoo are used by the occupants of the White House were cited as "trivia" and a "waste" of time and energy by Pierre Salinger,

President Kennedy's press secretary. Mr. Salinger has cited such requests in hitting the "trivial details" in American news. A Russian radio correspondent made news when he agreed with Mr. Salinger. The Moscow radio correspondent said the Russians weren't interested in such trivial things as what Khruschev eats for breakfast. The man from Moscow did admit, later, of course, that there are no commercial soaps in Russia.

\* \* \* \* \*

Info for the horsey set and for those who now and again place a couple of bucks on a nag's nose: Paul Mayfield, board member and vice-president of Hercules Powder Co. of Wilmington and horseman of note, recently told us that he now has eleven horses in his growing stable, three with knee trouble. He also has two brood mares, two yearlings and one weanling. Several are now at Belmont waiting to start including one of his top stakes performers, "Final Debate."

\* \* \* \* \*

"At last. A bath soap for bartones." Catch line of a clever advertisement in the New Yorker magazine for St. Johns Bay Soap, put out by the West Indies Bay Company, St. Thomas, Virgin Islands. A man's soap, so the advertisement says, "with the curiously uplifting scent of the West Indies bay

tree," packed three bars in a straw woven hamper. Four dollars a hamper, retail. A real good looking package to add to the growing list of gift soaps on the American market.

\* \* \* \* \*

From Jim Varley of the James Varley & Sons clan in St. Louis, we learn that the married life of Mr. and Mrs. James Colbert is chock full of coincidences. Mr. Colbert, who is vice-president and sales manager of Arizona Disinfecting Co., 50-year-old Phoenix, Ariz., sanitary supply jobber, was married in 1958. On April 22, 1959 their first child, Mark, was born. One year later to the day, the Colbarts had twins: Michele and Michael. On—you guessed it—April 22, this year, James, III, was born to the Colbarts. All four children with the same birthday. Jim Varley promises us he will be in Phoenix on April 22, next year, to see if this Colbert family thing is really rigged.

\* \* \* \* \*

A note from Simon S. Selig, Jr., president of the Selig Companies, with headquarters in Atlanta, informs us that Mrs. Marie Porter, better known as "Mrs. Selig Company" has been forced to retire after 35 years with the firm because of ill health. She was manager of the Selig Houston, Tex., branch since its opening.

En Gard: Dancer Judy Disher points to one million dollars worth of gold bullion being moved from Canadian Imperial Bank of Commerce vault to exhibit of G. H. Wood & Co. at recent Canadian National Exhibition. Feature of the Wood exhibit at the show was a 50 square foot golden clock, electronically controlled to keep perfect time. Idea of the booth, according to G. H. Wood, (left), president of the Toronto sanitation firm was to stress the fact that every 24 hours preventable sickness costs one million dollars. Looking on is Neil J. McKinnon, president of the Canadian Imperial Bank of Commerce.



